



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO24464**

Purchase Order Date 6/4/2014

PO Print Date 6/4/2014

Page Number 1 of 3

Order From :

VU-BEA001

B/E AEROSPACE INC
88289 EXPEDITE WAY
CHICAGO, IL 33172
USA

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

PAID
C24464/04

Contact Name
Vendor Phone 305-925-2600

Ship To Contact
Ship To Phone
Ship Via: FedEx PI collect
Ship Acct:

Buyer Chantal Lavoie
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency USD
FOB FCA - (Free Carrier)

m129405

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	MS27039C1-14	Screw	6/5/2014 Yes 6/5/2014	FN	50.00 Each	\$0.55	\$27.5
Line Total:							\$27.5
2	CR3553-4-02	RIVET	6/5/2014 Yes 6/5/2014	FN	100.00 Each	\$1.09	\$109.0
Line Total:							\$109.0
3	NAS1611-010	O-RING	6/5/2014 Yes 6/5/2014		300.00 Each	\$0.35	\$105.0

SP146-5.

Note:

6/4/2014



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Page Number 2 of 3

Order From :

VU-BEA001

Ship To : DART AEROSPACE LTD

B/E AEROSPACE INC
88289 EXPEDITE WAY
CHICAGO, IL 33172
USA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

305-925-2600

Ship To Contact

Ship To Phone

Ship Via:

FedEx PI collect

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

USD

FOB

FCA - (Free Carrier)

Line Total:

\$105.00

4 AN818-12J

Nut

6/5/2014

Yes

6/5/2014

10.00

Each

\$7.95

\$79.50

Line Total:

\$79.50

5 MS20819-12J

Sleeve

6/5/2014

Yes

6/5/2014

10.00

Each

\$4.77

\$47.70

Line Total:

\$47.70

Note:

6/4/2014



Dart Aerospace Ltd.
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VU-BEA001

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88289 EXPEDITE WAY
CHICAGO, IL 33172
USA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 305-925-2600

Ship To Contact

Ship To Phone

Ship Via: FedEx PI collect

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

USD

FOB

FCA - (Free Carrier)

6	71401-45	PROCUREMENT QUALITY CLAUSES	6/5/2014	1.00	\$0.00	\$0.00
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No

6/5/2014

Procurement Quality Clauses

A005 RIGHT OF ENTRY

A012 CHEMICAL AND PHYSICAL TEST REPORTS

A016 PERSONNEL QUALIFICATION

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A032 PUBLIC LAW 101-592 FASTENER QUALITY ACT

A033 STATEMENT OF CONFORMITY/TEST RECORDS

FOR NAS, AN and MS FASTENERS

A040 NOTIFICATION OF QUALITY ESCAPE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENTS

Line Total:

\$0.00

PO Total:

\$368.70

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr: 1

Change Date: 6/4/2014

PERMASWAGE**PERMASWAGE - Nelson Aerospace**

A Designed Metal Connections, Inc. Company

10310 Norris Avenue

Pacoima, CA 91331

Ph: 818-686-0900

Fax: 818-686-0181

Pack Slip: 48533



Sales Order: 29800



Page: 1 of 1

**Customer
Packing Slip****Ship To:**B/E AEROSPACE CONSUMABLES MANAGEM
9835 NW 14TH ST
MIAMI FL 33172
USA

Verify AES requirements prior to shipment.

Sold To:B/E AEROSPACE CONSUMABLES MANAG
PO BOX 025263
MIAMI FL 33102-5263
USA

Verify AES requirements prior to shipment.

Fax: 305-507-7194

Ship Date: 8/23/2013

Ship Via: FEDEX GROUND

F.O.B.: EX WORKS

Cust P.O.: 0RLR87

Salesperson: JIM THOMPSON

PO Line	Planned Qty	Shipped Qty	Back Order Qty	Part Number Description	Rev	Lot Number
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FEDEX GRD # 0331-0149-0

RELEASE # BR500RLR87
5,000

600

4,400.00

MS20819-12J

F00020481-21038

SLEEVE

Sale Order / Line / Release: 29800 / 1 / 1

Customer PO Number: 0RLR87

Certificates Required:Standard Certification: No
Full Certifications: YesFirst Article Inspection: No
Chemical/Physical: NoMaterial Certificate: No
FAIR per AS9102: No**Product is compliant to DFAR 252.225-7009**

1 BOX 19 LBS 10X8X6

AN, MS, AS, NAS and other industry standard parts controlled by ECCN 9A991 and HTS 8803.30.00.00

Products listed have not been exposed to mercury or mercury compounds during the manufacturing process.

!! MATERIAL TO BE RETURNED MUST HAVE PRIOR AUTHORIZATION BY PERMASWAGE -NELSON AEROSPACE SALES @ 818-686-0900 !!

WE HERBY CERTIFY THAT ALL PROVISIONS OF THE FAIR LABOR STANDARDS ACT ON 8/25/83 AS AMENDED HAVE BEEN FULLY COMPLIED WITH IN THE MANUFACTURE, PRODUCTION OR PURCHASE OF GOODS LISTED HEREON. ALL ITEMS ARE SUBJECT TO A 100% RESTOCKING CHARGE. ALL PAST DUE ACCOUNTS SHALL BEAR INTEREST AT THE RATE OF 112% PER MONTH (18% PER ANNUM).

Certification of Conformance

NELSON AEROSPACE WARRANTS THAT THE ITEMS OF THIS SHIPPER WILL BE FREE FROM DEFECTS OF MATERIAL AND WORKMANSHIP AND, AS SET FORTH ON THE MATERIAL CERTIFICATION FORM, ACCOMPANYING THE ITEMS OF THIS INVOICE, ARE IN CONFORMITY WITH CONTRACT REQUIREMENTS AND SPECIFICATIONS, GOVERNMENT OR OTHERWISE. NELSON AEROSPACE DISCLAIMS ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ALL WARRANTIES OF MERCHANTABILITY AND OF THE FITNESS FOR A PARTICULAR PURPOSE. THE LIABILITY OF NELSON AEROSPACE IS EXPRESSLY LIMITED TO REPLACEMENT OF ANY ITEM WHICH IS REJECTED BECAUSE OF A DEFECT IN MATERIAL OR WORKMANSHIP. SUCH REPLACEMENT SHALL CONSTITUTE SATISFACTION OF ALL LIABILITY NELSON AEROSPACE MAY HAVE IN CONNECTION WITH SUCH ITEM, WHETHER LIABILITY IS BASED UPON CONTRACT RIGHTS, NEGLIGENCE OR OTHERWISE, AND IN NO EVENT SHALL NELSON AEROSPACE BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES. FURTHER, NELSON AEROSPACE MUST BE NOTIFIED OF A REJECTION OF AN ITEM WITHIN 30 DAYS AFTER RECEIPT BY THE CUSTOMER.

Country of Origin: MADE IN THE USA

BY RECEIVING DELIVERY OF THE GOODS COVERED BY THIS PACKING SLIP, BUYER EXPRESSLY ASSENTS TO THE TERMS AND CONDITIONS SET FORTH.

Manager of Quality Assurance or Designee



B/E Aerospace, Inc.

Page: 1 of 1

CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO24464

LINE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
4	10	EA	AN818-12J		8005	INLAND MACHINE	6W617		


Jason Lewis
Vice President of Quality

06/04/14

Receiving Report

Date: 14-6-6

Batch No: 129406

Supplier: B/E

Dart P/O: 24455

Packing Slip: Yes ☒ No ☐
 Invoice: Yes ☒ No ☐
 Receipt: Cash ☐ Cr ☒
 New Supplier Yes ☐ No ☒

Release Note Attached: Yes ☒ No ☐ N/A ☐
 Waybill Attached: Yes ☒ No ☐ N/A ☐
 Shipment Complete: Yes ☒ No ☐ N/A ☒
 QC18 Inspection ☐ N/A ☒
 Work Order ☐ N/A ☒

Discrepancies

Part Number	Description	Quantity Ordered	Quantity Rec'd	Quantity Short	Quantity Inspected	Quantity Rejected	Comment / NCR Number

Initials of Receiver

QC12

SP

Production/Admin:

Date

Received/Costing

Initial

14-6-6
SP

Location

INLAND
MACHINE COMPANY

(909) 484-5579

FAX (909) 484-4825

10762 EDISON COURT
RANCHO CUCAMONGA, CA 91730

Invoice

To:
B/E AEROSPACE INC
P.O. BOX 025263
MIAMI, FL 33102

Ship To:
B/E AEROSPACE CONSUMABLES MANAGEMENT
9835 NW 14TH ST.
MIAMI, FL 33172

Invoice Date: 2/25/2014 Terms: 2 % 10 NET 30
Order Date: 8/22/2013 Cust. PO#: ORVL01
Ship Date: 2/25/2014 FOB:
Sales Order: ORVL01 Buyer:
Customer #: BEA1

Weight:
of Boxes:
Shipment #: 1

Ship Via: FED EX GRND
Ship Via Acc: 0331-0149-0
Invoice #: 43708

Item	Part Number/Description	Shipped	BackOrd	CD	Unit Price	Total Amt
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1	AN818-12J NUT REV. 20 FULL CERTS JOB # 8005 PARTS ARE DFAR COMPLIANT MADE IN USA	5000	0	NE		
---	----------------------------------------------------------------------------------------------------------	------	---	----	--	--

PACKING LIST

ALL PAST DUE ACCOUNTS SHALL BEAR INTEREST
AT THE RATE OF 1 1/2 % PER MONTH.

THIS IS TO CERTIFY THAT ALL ARTICLES DELIVERED UNDER THIS
SHIPPER, CONFORMS TO ALL APPLICABLE BLUE PRINT SPECIFICATION.
AND EVIDENCE OF SUCH IS ON FILE SUBJECT TO EXAMINATION

It is agreed by buyer that upon delivery of parts, said will be inspected and that if any parts are defective buyer agrees to notify seller within ten (10) days
limitation: Buyer agrees that it waives all rights to any damages and credits against any amount of invoice

INLAND MACHINE COMPANY

MANUFACTURING AN-MS-NAS HYDRAULIC FITTINGS

MANUFACTURER'S AFFIDAVIT

I, RONALD DORFF hereby certify that the below named parts
(Name)

were manufactured by INLAND MACHINE COMPANY located at
(Company Name)

10762 EDISON CT
(Street Address)

RANCHO CUCAMONGA, CA
(city) (State)

91730
Zip Code

Part No.	Part Description
AN818-12J	NUT REV 20
JOB# 8005	

I further certify that should any change in the manufacturing process occur which changes the country of origin; I will immediately notify B/E Aerospace Hardware, Inc. in writing and provide a new Manufacturer's Affidavit.


(Signature)

QUALITY CONTROL MANAGER
(Title)

FEBRUARY 25, 2014
(Date)

THIS DOCUMENT IS INTENDED ONLY FOR THE USE OF THE PERSON(S) TO WHOM IT IS ADDRESSED, IT MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL AND EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW. If you are not the intended recipient, any dissemination, distribution, copying or other use of this document is strictly prohibited. If you have received this communication in error, please notify us by telephone 305.925.2600 to arrange for the destruction or return to us of original document.

10762 EDISON COURT - RANCHO CUCAMONGA, CA 91730 - 909-484-5579 - FAX 909-484-4825
EMAIL: imcfiffings@earthlink.net



PRECISION CONTROL FINISHING INC.

12150 S. BLOOMFIELD AVE. BLDG D., SANTA FE SPRINGS, CA 90670
(562) 484-3930 FAX (562) 484-3940

099985

99985

TERMS: 1% within 10 days. Net 30 days. Net and Past Due thereafter subject to a service of 1.5% per month (18.0% per annum) for balances past due 30 days an over. Terms do not apply to C.O.D.

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INLAND MACHINE COMPANY
10762 EDISON COURT
RANCHO CUCAMONGA, CA91730

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INLAND MACHINE COMPANY
10762 EDISON COURT
RANCHO CUCAMONGA, CA91730

P.O. NO.	TERMS NET 30	SHIPPED VIA	SHIPPER NO.	MATERIAL	SHIPPED DATE
V25019	Net 30			304 SS	12/6/2013
QUANTITY	DESCRIPTION AND/OR PART NUMBER			SHIPPED	
5,500	AN818-12J NUT JOB# 8005				70
	PASSIVATED PER AMS 2700 REV. E				
	METHOD 1 TYPE VI				
	COPPER SULFATE TESTED PER METHOD 102, 13 PC. SAMPLE				00
	H. W. D. S. (7%)				43

P.C.F. LIABILITY SHOULD BE LIMITED TO THE COST OF DIRECT LABOR AND MATERIAL DAMAGE OR THREE TIMES OUR PROCESSING CHARGES ON MATERIAL, OR WHICHEVER IS LESS.
THE PURCHASER AGREES THAT IN THE EVENT HE FAILS TO PAY HIS ACCOUNT AND THE MATTER IS REFERRED TO AN ATTORNEY TO ENFORCE PAYMENT, HE WILL, IN ADDITION TO THE SUMS DUE, PAY A REASONABLE ATTORNEY'S FEES AND ANY COURT COSTS OF ENFORCEMENT.

TOTAL

WE HEREBY CERTIFY THE ABOVE LISTED PARTS ARE PROCESSED IN ACCORDANCE WITH APPLICABLE SPECIFICATION. TEST REPORTS ON FILE.

SPEC. NO. **AMS 2700E**

TYPE **TYPE VI** CLASS

BY

Guillermo Oliveros
Q.C. Inspector

WE HEREBY CERTIFY THE ABOVE LISTED PARTS ARE PROCESSED IN ACCORDANCE WITH.

SPEC. NO.

TYPE CLASS

BY

WE HEREBY CERTIFY THE ABOVE LISTED PARTS ARE PROCESSED IN ACCORDANCE WITH APPLICABLE SPECIFICATION. TEST REPORTS ON FILE.

SPEC. NO.

TYPE CLASS

BY

ANY DISCREPANCY MUST BE REPORTED WITHIN 24 HOURS

RECEIVED X

SUBJECT TO CONDITIONS OF LIABILITY ON PACKING SLIP

SHIPPER'S / CERTIFICATION

**VALBRUNA**

SLATER STAINLESS INC.

2400 TAYLOR STREET, WEST, FORT WORTH, TX 76107-1151
PHONE 817 434-2808 FAX 817 434-2801**Product Certification Report**Report Number: **4915310**

Certified on Sep 13, 2013 Page 1 of 1

Order I.D. 1300643 004		Order Date 3/14/13		Commodity Code 304HX1.25	
Dim 1 1.2500	Dim 2 .0000	Dim 3 .0000	Heat I.D. 260535	Customer I.D. 002474	Customer Purchase Order 35313
Product Shape Cold Drawn Hex			Product Surface Cold Drawn Finish		Customer Grade 304/304L
Length (inches) 132.000 Min, 156.000 Max			Bill of Lading # 420129	Weight	

Ship To
VALBRUNA STAINLESS, INC.
13950 BENSON AVENUE
CHINO, CA 91710

Sold To
VALBRUNA CORP.
31 IRON HORSE ROAD
OAKLAND, NJ 07436

Lifts: 0034 0036

Condition A	QQ-S-763F	ASTM 276-13
ASTMA 479-12	ASMESA 479-10	AMS 5639H
AMS 5647J	SAS-AMS QQ-S-763C	

CHEMICAL ANALYSIS

C	Mn	P	S	Si	Cr	Ni	Mo	Cu	N
.018	1.85	.032	.030	.58	18.19	8.09	.59	.60	.10

BRINELL HARDNESS ASTM E10-12

HBW

216

TENSILE PROPERTIES ASTM E8-13a

TS (PSI)	2%YS (PSI)	%EL(2")	%RA
98900	67700	45.2	71.6

MACRO ASTM E340-00/E381-01

MACRO

OK

OK

OK

GRAIN SIZE ASTM E112-10

GRAIN SIZE	Etchant	Magnification X
6	Oxalic	100

ASTM A262-10 PR E(A Utilized)

OXALIC	Etchant	Magnification X
OK	Oxalic	500

No welding or weld repair done.

Material when shipped is free from contamination by mercury, radium, alpha source, and low melting elements.

Chemical testing to one or more of the listed ASTM methods:

E415-08, E572-02a, E1019-11, E1085-95, E1086-08.

Location of tensile fracture: inside middle of gage length.

Chemical Analysis performed at Acciaierie Valbruna, Italy.

No mercury or low melting alloy contamination. No weld repair.

Material melted in Italy, manufactured in the United States.

Material conforms to listed specifications and is DFARS compliant.

Quality system is compliant with ISO 9001:2008. Produced in accordance with EN 10204 3.1.

Results relate only to the items tested. Certification shall not be reproduced except in full, without written approval of Valbruna Stainless Inc. The recording of false, fictitious, or fraudulent statements on this document may be punished as a felony under federal statutes, including Federal law Title 18, Chapter 47. Consult material safety data sheet (MSDS) for hazard info.

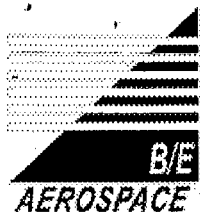
I hereby certify that the reported figures are correct as contained in the records of the corporation.

Manager Laboratory Services

email: DHackett@valbruna.us

Dennis Hackett

Inland Job# 8005 AN 818-12J



B/E Aerospace, Inc.

Page: 1 of 1

CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172

Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO24464

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	CURE DATE	EXP DATE
3	300	EA	NAS1611-010						
			QTY: 239		JHEE18 3Q10	SIMRIT FREUDENBERG,	KC3N2	09/29/10	UNLIMITED
			QTY: 40		0080040058/1Q06	PARKER COMPOSITE SAN	83259	03/31/06	UNLIMITED
			QTY: 21		0080050003/1Q07	PARKER COMPOSITE SAN	83259	01/01/07	UNLIMITED

Jason Lewis
Vice President of Quality

06/04/14

KAPCO VALTEC

INVOICE

SHIP: ESSEX INDUSTRIAL PARK
ESSEX, CT 06426
MAIL CORRESPONDENCE TO:
P.O. BOX 747
IVORYTON, CT 06442
TEL (860) 767-8211 • ARINC BDLVTD • FAX (860) 767-2918

PLEASE REMIT TO:
774014
4014 Solutions Center
Chicago, Ill
60677 4000

INVOICE NO.	PAGE
1038813	1
INVOICE DATE	
06/15/06	

SOLD TO
UFC Aerospace Corp.
P. O. Box 250
Bay Shore

NY 11706

SHIP TO
UFC Aerospace Corp.
25 Drexel Drive
Bay Shore

NY 11706



QUALITY SYSTEM
REGISTERED TO
ISO 9001:2000
(WITH ASD100)

IR ORDER	ORDER DATE	CUSTOMER NO.	LOC.	SLSMN.	CUSTOMER P.O.	WAYBILL	SHIP VIA	FRE COL
V060	06/06/06	UNIFA 2190	CT		PUR00J7W	0343640852	UPS Ground Trac k	

QTY. ORDERED	QTY. SHIPPED	QTY. B.O.	CUSTOMER PART NO. DESCRIPTION	HSTC#	COUNTRY OF ORIGIN	UNIT PRICE	U/M	LINE AMOUNT
300	1300		<p>Notice: Please!!! Do not send pre-packs of NAS1611's and NAS1612's CS</p> <p>Notice: Cannot accept standards from anyone except GPL mfg. not Boeing</p> <p>NAS1611-010 PACKING</p>		USA		EA	
<p>8803.30.0010 4*ITEM COMPLETE*</p>								
<p>THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE U.S. IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.</p>								

JUN 20 2006



QTY.	QTY.	QTY.	TERMS
0	1	1	1X/10/N30
2	0	0	FOR ESSEX UNLESS OTHERWISE STATED.
2	0	0	COMMENTS

PRODUCT TOTAL

MISC. CHARGES
SHIPPING CHARGE
SALES TAX
IN US DOLLARS
INVOICE TOTAL

RETURNS OF MERCHANDISE, CLAIMS FOR DAMAGES OR SHORTAGES MUST BE WITH OUR PERMISSION AND WITHIN 30 DAYS OF RECEIPT OF GOODS.
ALL RETURNS SUBJECT TO 15% HANDLING CHARGE IF RETURNED IN GOOD CONDITION AND IN ORIGINAL CONTAINER

* UPS# 038979
* WAYBILL# 03436408

KAPCO VALTEC

KAPCO VALTEC

MAIL: P.O. BOX 747
IVORYTON, CT 06442
SHIP: ESSEX INDUSTRIAL PARK
ESSEX, CT 06426

SHIP: ESSEX INDUSTRIAL PARK
ESSEX, CT 06426

TEL (860) 767-8211 • ARINC BDLVTXD • FAX (860) 767-2918

SHIP
TO

SOLD TO **UFC Aerospace Corp.**
P. O. Box 250
Bay Shore NY 11706

UFC Aerospace Corp.
25 Drexel Drive
Bay Shore NY 11706

Packslip No: 1038813 1

ORDER DATE	PAGE
06/06/06	1

0 1 1
2 0 0
2 0 0 5

OUR ORDER	DATE SHIPPED	CUSTOMER NO	LOC	SLSMN	CUSTOMER P.O.	WAYBILL	SHIP VIA
TV060	06/15/06	UNIFA 2190	CT	9	PUR00J7W	0343640852	UPS Ground Trac k

QTY ORDERED	QTY SHIPPED	U/M	CUSTOMER PART NO. DESCRIPTION	HSTG NO
1300			NAS1611-010 PACKING	8803.30.0010 4 *ITEM COMPLE
	400	EA	PARHA 1Q06 0080040058A	
	900	EA	PARHA 1Q06 0080040058B	



THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED. The following signature attests that the status of the parts identified above is new and were manufactured by a FAA Production Approval Holder, or to an industry or commercial standard, and inspected in accordance with the applicable industry or U.S. specification and/or the airworthiness regulations of the country of origin.

Valtec Aircraft Supply

Sam Thomas, Quality Manager

Returns of merchandise, claims for damages or shortages must be with our permission and within 30 days of receipt of goods. All returns subject to 15% handling charge if unused, in good condition and in original container. Standard Terms and Conditions set forth on the reverse side of this Acknowledgement shall apply to and govern the sale of goods hereunder and supersede any provision inconsistent therewith unless in writing and signed by both you and VALTEC.

SHIPMENT - Seller reserves the right of over or under shipment of goods manufactured to Buyer's order but not exceeding 10% of the quantity ordered. The total price shall be adjusted to reflect the increase or decrease in quantity.

TOTAL CTNS

PACKING SLIP/CERTIFI



Parker Hannifin Corporation

O-Ring Division
 Parker Seal de Matamoros
 Diagonal Lorenzo De La Garza #13 Ciudad
 H. Matamoros, Tam. 87499, Mexico
 Phone: (859) 335-3000

— NOTICE —
This is a C.B.I. Compound!

C.B.I. is Parker's exclusive quality assurance program for Controlled Batch Identification, your assurance of reliability.

CONFORMANCE CERTIFICATE FOR MATERIAL SHIPPED

Parker O-Ring Division certifies that the material used in the manufacture of the parts identified below and called for on Purchase Order Number 155310 received by us from VALTEC INC is traceable to C.B.I. Number 0080040058 and that the material used conforms to the requirements of the specifications indicated below. The tests were performed in accordance with these specifications, and data supporting the indicated results are on file.

CUSTOMER PART NUMBER	PARKER PART NUMBER	COMPOUND	QUANTITY	CURE DATE	SHIP DATE
NAS1611-010	REV 10 2-010-80 TESTED AS: 2-214	E0515 -80	3929	1Q06	02/27/06
SPECIFICATION NAS1613 REV2 TYPE CLASS		TEST DT 02/23/06			
ACCEPTANCE TEST DATA PER PARAGRAPH 4.5 4.5A EXAMINATION OF PRODUCT (1.0 AQL LEVEL II)					
LOT SIZE 3929		SAMPLE SIZE 200			
VARIABLE DATA ACCEPT/REJECT 200/0		ATTRIBUTE DATA ACCEPT/REJECT 200/0			
4.5.B SPECIFIC GRAVITY 1.2400		(REQUIRED)			
4.5.C VOLUMETRIC SWELL 11.0		(OPTIONAL)			
4.5.D DURE HARDNESS (UNSOAKED) 78		(REQUIRED)			
<p>RECEIVED MAR 07 2006 INSPECTOR 1F</p>					
<p>Testing Performed By PSDM Lab Diagonal Lorenzo De La Garza #13 Ciudad H. Matamoros, Tam. 87499, Mexico</p>					

No Mercury, Mercury compounds or Mercury bearing Instruments, equipment or apparatus which might cause contamination has been used in the manufacture or subsequent processing of material covered by this order.

Purchaser use only. Reproduce only in full. Data pertains to items referenced.

The recording of false, fictitious or fraudulent statements or entries on the certificate may be punishable as a felony under federal law.

The information contained herein is submitted as the privileged and confidential property of the Parker Hannifin Corporation pursuant to 5 U.S.C. Section 552 (b)(3) and (b)(4), the Freedom of Information Act, exemption Number 3 and Number 4. This information shall not be duplicated, used or disclosed in whole or in part outside the recipient organization without express written consent of the Parker Hannifin Corporation.

O-Ring Division
PARKER HANNIFIN CORPORATION

By

Ruben Ramirez
 Quality Assurance Manager



10/18/10

CUSTOMS INVOICE/PACKING SHEET



2639537 00

Cust#: 41513
SOLD TO: B/E AEROSPACE
CONSUMABLES MANAGEMENT

SHIP TO: B/E Aerospace Consumables Management
Parc d'activite des Bethunes
12Avenue du Fief

STE OUEN L'AUMONE, FR
Pref. Routing Routine: FEDX INTL ECON

CORRESPONDENCE TO: B/E AEROSPACE
CONSUMABLES MANAGEMENT
10000 N.W. 15th Terrace
Miami, FL 33172

UPC VENDOR	INVOICE NO.	ON DOCK
000000		10/12/10
PROMISED	REQUEST	SHIPPED
10/18/10	10/18/10	
CUSTOMER P.O.		CUSTOMER RELEASE
OSM492		OSM492

P.O. NUMBER	ITEM NO.	PART NUMBER	ICN No.	QTY	UOM	UNIT PRICE	TOTAL VALUE	COUNTRY OF ORIGIN	QUANTITY ORDERED	QUANTITY B.O.	QUANTITY SHIPPED
OSM492	1	NAS1611-010		2000.00	EA				2000.00	0.00	2000.00
		Desc: PACKING "11"									
		PCAT: S									
		No License Required									
			226147	1133.00		Cure: 3Q2010		US			
		MFR- Name: INTERNATIONAL SEAL - FNGP									
		MFR-Product: 62AS568-010 E458									
		Revision: 10									
		MFR- Batch: JHEE18									
			226734	867.00		Cure: 3Q2010		US			
		MFR- Name: INTERNATIONAL SEAL - FNGP									
		MFR-Product: 62AS568-010 E458									
		Revision: 10									
		MFR- Batch: JJBE18									
		IT IS HEREBY CERTIFIED THAT THE ITEM IDENTIFIED HEREIN CONFORMS TO AN ESTABLISHED INDUSTRY, U.S. GOVERNMENT, OR COMMERCIAL STANDARD. PARTS ARE BEING SHIPPED BY KAPCO ON BEHALF OF BE AEROSPACE CONSUMABLES MANAGEMENT, UNDER									

The merchandise listed has been produced in accordance with Fair Labor Standards Act of 1938 as amended. No claims allowed unless made within ten (10) days after receipts of Goods and in no case shall the liability assumed by us under the guarantees either expressed or implied, exceed the face value of the invoice for the merchandise in question.

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to U.S. Law is prohibited.

SHIPPED UNDER NLR HSI#8803.30.0010 - ECCN: 9A991.D

COUNTRY OF ORIGIN: USA

TOTAL BOX VALUE:

PAGE 1



CERTIFICATE OF CONFORMANCE

WE HEREBY CERTIFY THAT THE PRODUCT SUPPLIED IS NEWLY MANUFACTURED, CONFORMS TO THE APPROVED DESIGN DATA, AND MEETS ALL REQUIREMENTS OF THE APPLICABLE PURCHASE ORDER. EVIDENCE OF CONFORMANCE IS ON FILE AND AVAILABLE FOR REVIEW UPON REQUEST.

TIM GILL
CORPORATE VICE PRESIDENT OF QUALITY

Thank You For This Order
PACKING LIST

10/18/10

CUSTOMS INVOICE/PACKING SHEET



2639537 00

Cust#: 41513

SOLD TO: B/E AEROSPACE
CONSUMABLES MANAGEMENTSHIP TO: B/E Aerospace Consumables Managemen
Parc d'activite des Bethunes
12Avenue du Fief

STE OJEN L'AUMONE, FR

Pref. Routing Routine: FEDX INTL ECON

CORRESPONDENCE TO: B/E AEROSPACE
CONSUMABLES MANAGEMENT
10000 N.W. 15th Terrace

Miami, FL 33172

UPC VENDOR	INVOICE NO.	ON DOCK
000000		10/12/10
PROMISED	REQUEST	SHIPPED
10/18/10	10/18/10	
CUSTOMER P.O.		CUSTOMER RELEASE
OSM492		OSM492

P.O. NUMBER	ITEM NO.	PART NUMBER	ICN No.	QTY	UOM	UNIT PRICE	TOTAL VALUE	COUNTRY OF ORIGIN	QUANTITY ORDERED	QUANTITY B.O.	QUANTITY SHIPPED
		LICENSING AGREEMENT. S/L: UNLTD ARP5316 INSP BY: Yvette Ramos 10/18/2010									

The merchandise listed has been produced in accordance with Fair Labor Standards Act of 1938 as amended. No claims allowed unless made within ten (10) days after receipts of Goods and in no case shall the liability assumed by us under the guarantees either expressed or implied, exceed the face value of the invoice for the merchandise in question.

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to U.S. Law is prohibited.
SHIPPED UNDER NLR HSI#8803.30.0010 - ECCN: 9A991.D
COUNTRY OF ORIGIN: USA

TOTAL BOX VALUE:

PAGE 2



CERTIFICATE OF CONFORMANCE

WE HEREBY CERTIFY THAT THE PRODUCT SUPPLIED IS NEWLY MANUFACTURED, CONFORMS TO THE APPROVED DESIGN DATA, AND MEETS ALL REQUIREMENTS OF THE APPLICABLE PURCHASE ORDER. EVIDENCE OF CONFORMANCE IS ON FILE AND AVAILABLE FOR REVIEW UPON REQUEST.

TIM GILL
CORPORATE VICE PRESIDENT OF QUALITYThank You For This Order
PACKING LIST

simrit®

INTERNATIONAL SEAL 

Page 1 Of 1

----- CERTIFICATE OF CONFORMANCE -----

TO: KAPCO
3120 EAST ENTERPRISE ST
BREA, CA 92821-6237

Cust. PO NO: 224246-00

Contract NO:
S/O Number: 06231898

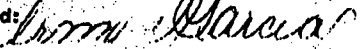
Specification : NAS 1613 Rev 2

L#	Our Part Number/Customer P/N	Quantity	Batch	Cure
001	62AS568-010 E458 NAS1611-010	1,434.00 NAS1611-010 REV 10	JHEE18	3010

Test Description	Test Results	Requirements
Examination of Product (MIL-STD-413)	Pass	
Fluid Immersion, Skydrol 500B4; 70 hrs @ 160F; ASTM D471: Volume Change, %	3.1	0 To 8
Specific Gravity ASTM D297	1.2	1.18 To 1.22
Hardness, Durometer M; Unsoaked Condition	79	75 To 85

THIS IS A COPY OF THE ORIGINAL
CERTIFICATION AS DELIVERED
TO KAPCO

This is to certify that the above parts were made in conformity with the specification listed, and that the above test results were obtained. This report shall not be reproduced, except in full, without the written approval of ISC-FNQP laboratory. The material furnished is free from Mercury contamination.

Signed: 
Title : Quality Assurance Representative
Date : 09/29/10



KAPCO ICN

22 6 1 4 7

Simrit
Freudenberg and NOK Group

2041 East Wilshire Ave.
Santa Ana, CA 92705
USA

Phone: (714) 834-0602
Fax: (714) 834-0590

International Seal, Co. (ISC) is a
wholly owned subsidiary of
Freudenberg-NOK.

Freudenberg and NOK Group



Parker Hannifin Corporation

O-Ring Division
Parker Seal de Matamoros
Diagonal Lorenzo De La Garza #13 Ciudad
H. Matamoros, Tam. 87499, Mexico
Phone: (859) 355-3000

NOTICE

This is a C.B.I. Compound!

C.B.I. is Parker's exclusive quality assurance
program for Controlled Batch Identification,
your assurance of reliability.

CONFORMANCE CERTIFICATE FOR MATERIAL SHIPPED

Parker O-Ring Division certifies that the material used in the manufacture of the parts identified below and called for on Purchase Order Number 49509 received by us from KAPCO VALTEC is traceable to C.B.I. Number 0080050008 and that the material used conforms to the requirements of the specifications indicated below. The tests were performed in accordance with these specifications, and data supporting the indicated results are on file.

CUSTOMER PART NUMBER	PARKER PART NUMBER	COMPOUND	QUANTITY	CURE DATE	SHIP DATE
NAS1411-010	REV 10 2-010-80 TESTED AS: E0515 2-010-80	E0515 -80	2359	1Q07	12/10/07
SPECIFICATION NAS1413 REV2 TYPE CLASS		TEST DT 02/26/07			
ACCEPTANCE TEST DATA PER PARAGRAPH 4.5 4.5A EXAMINATION OF PRODUCT (1.0 AQL LEVEL II)					
LOT SIZE	2359	SAMPLE SIZE	125		
VARIABLE DATA ACCEPT/REJECT 125/0		ATTRIBUTE DATA ACCEPT/REJECT 125/0			
4.5.B	SPECIFIC GRAVITY 1.2400	(REQUIRED)			
4.5.C	VOLUMETRIC SWELL 9.0	(OPTIONAL)			
4.5.D	DURO HARDNESS (UNSOAKED) 77	(REQUIRED)			
Testing Performed By PSDM Lab Diagonal Lorenzo De La Garza #13 Ciudad H. Matamoros, Tam. 87499, Mexico					
CAGE CODE: 02697					

No Mercury, Mercury compounds or Mercury bearing instruments, equipment or apparatus which might cause contamination has been used in the manufacture or subsequent processing of material covered by this order.

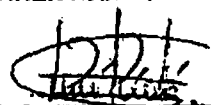
Purchaser use only. Reproduce only in full. Data pertains to items referenced.

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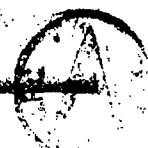
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O-Ring Division
PARKER HANNIFIN CORPORATION

By



Ruben Ramirez
Quality Assurance Manager





Parker Hannifin Corporation
O-Ring Division
 P.O. Box 2276
 Brownsville, TX 78522
 Phone: (859) 335-3000

— NOTICE —
This is a C.B.I. Compound!

C.B.I. is Parker's exclusive quality assurance program for Controlled Batch Identification, your assurance of reliability.

CONFORMANCE CERTIFICATE FOR MATERIAL SHIPPED

Parker O-Ring Division certifies that the material used in the manufacture of the parts identified below and called for on Purchase Order Number 49509 received by us from KAPCO VALTEC BREA CA CA is traceable by Control Batch Identification Number 0080050003 0080071610

SHIPMENT DATE: 12/10/07

CUSTOMER PART NUMBER	PARKER PART NUMBER	COMPOUND	QUANTITY
NAS1611-010	2-010-80	E0515-80	15000

PARKER O-RING DIVISION ALSO CERTIFIES THAT CONTROL BATCH IDENTIFICATION (CBI) TESTS HAVE BEEN PERFORMED ON THE BATCH OF MATERIAL USED TO MANUFACTURE SUCH PARTS. THESE TESTS ARE PREPRODUCTION BATCH ACCEPTANCE TESTS, AND THE RESULTS OF SUCH TESTS ARE AS SET FORTH BELOW. DATA THAT SUPPORTS THESE RESULTS ARE ON FILE WITH PARKER. SEE THE APPLICABLE PARKER CATALOG FOR FURTHER INFORMATION CONCERNING THESE PREPRODUCTION TESTS.

BATCH #	HARDNESS	TENSILE	ELONGATION	S.G.	MODULUS	
0080050003	76	2118	198	1.24	1005	1Q07
0080071610	77	2079	221	1.24	930	4Q07

THE REMAINING SHELF LIFE SHALL BE DETERMINED BY UTILIZING THE CURE DATE LISTED ABOVE AND APPLYING THE APPLICABLE SHELF LIFE RECOMMENDATION AS LISTED IN ARP 5316, ASSUMING PROPER STORAGE CONDITIONS.

No Mercury, Mercury compounds or Mercury bearing instruments, equipment or apparatus which might cause contamination has been used in the manufacture or subsequent processing of material covered by this order.

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O-Ring Division
PARKER HANNIFIN CORPORATION

By

Ruben Ramirez
 Quality Assurance Manager

INSP BY
17



1724233 00

SHIPPER: KAPCO|VALTEC
1 ESSEX INDUSTRIAL PARK
ESSEX, CT 06426

SOLD TO: Cust#: 31107
UNITED FASTENER CO INC
PO BOX 250

SHIP TO: UNITED FASTENER CO INC
25 DREXEL DRIVE

BAYSHORE, NY 11706 US

BAYSHORE, NY 11706
Pref. Routing COLLECT GRD

UPC VENDOR	INVOICE NO.	ON DOCK
000000	1724233-00	
PROMISED	REQUEST	SHIPPED
12/27/07	12/27/07	
CUSTOMER P.O.		

FORWARD TO:

P.O. NUMBER	ITEM NO.	PART NUMBER	ICN No.	QTY	UOM	UNIT PRICE	TOTAL VALUE	COUNTRY OF ORIGIN	QUANTITY ORDERED	QUANTITY B.O.	QUANTITY SHIPPED
PUR0197A	1	NAS1611-010		200.00	EA				200.00	0.00	200.00
		Desc: PACKING "10" PCAT: S1									
		SCH B: 8803.30.0010 No License Required	ECCN: 9A991 143344-01	200.00		Cure: 1Q2007					
		MFR- Name: PARKER SEAL COMPANY Revision: 10 MFR- Batch: 0080050003 KAPCO CERTIFIES THAT WE ARE AN ACCREDITED DISTRIBUTOR MEETING ISO9001:2000 AND THE PROVISIONS OF AC00-56A. THE ITEM(S) IDENTIFIED HEREIN CONFORM TO AN ESTABLISHED INDUSTRY, U.S. GOVERNMENT, OR COMMERCIAL STANDARD. S/L: UNLTD ARP5316 INSP BY: jhn 12/26/2007									

The merchandise listed has been produced in accordance with Fair Labor Standards Act of 1938 as amended.
No claims allowed unless made within ten (10) days after receipts of Goods and in no case shall the liability
assumed by us under the guarantees either expressed or implied, exceed the face value of the invoice for the
merchandise in question.

TOTAL BOX VALUE:

PAGE 1

PAYABLE IN U.S. FUNDS ONLY. THANK YOU FOR THIS ORDER.
WIRE TRANSFERS: CHECK PAYMENTS:

KAPCO|VALTEC

CERTIFICATE OF CONFORMANCE

WE HEREBY CERTIFY THAT THE PRODUCT SUPPLIED ON YOUR PURCHASE ORDER IS NEWLY
MANUFACTURED AND CONFORMS TO THE APPROVED DESIGN DATA. EVIDENCE OF
CONFORMANCE IS ON FILE AND AVAILABLE FOR REVIEW UPON REQUEST.

DOUG CREELMAN
DIRECTOR OF CORPORATE QUALITY

Thank You For This Order
PACKING LIST

12/26/07

CUSTOMER INVOICE/ PACKING SLIP



1724233 00

SHIPPER: KAPCO|VALTEC
1 ESSEX INDUSTRIAL PARK
ESSEX, CT 06426

UPC VENDOR	INVOICE NO.	ON DOCK
000000	1724233-00	
PROMISED	REQUEST	SHIPPED
12/27/07	12/27/07	
CUSTOMER P.O.		

SOLD TO: UNITED FASTENER CO INC
PO BOX 250

SHIP TO: UNITED FASTENER CO INC
25 DREXEL DRIVE

FORWARD TO:

BAYSHORE, NY 11706 US

BAYSHORE, NY 11706

Pref. Routing COLLECT GRD

P.O. NUMBER	ITEM NO.	PART NUMBER	ICN No.	QTY	UOM	UNIT PRICE	TOTAL VALUE	COUNTRY OF ORIGIN	QUANTITY ORDERED	QUANTITY B.O.	QUANTITY SHIPPED
PUR0197A	1	NAS1611-010		200.00	EA				200.00	0.00	200.00
		Desc: PACKING "10" PCAT: S1									
		SCH B: 8803.30.0010 No License Required	ECCN: 9A991								
			143344-01	200.00		Cure: 1Q2007					
		MFR- Name: PARKER SEAL COMPANY Revision: 10 MFR- Batch: 0080050003 KAPCO CERTIFIES THAT WE ARE AN ACCREDITED DISTRIBUTOR MEETING ISO9001:2000 AND THE PROVISIONS OF AC00-56A.THE ITEM(S) IDENTIFIED HEREIN CONFORM TO AN ESTABLISHED INDUSTRY, U.S. GOVERNMENT, OR COMMERCIAL STANDARD. S/L: UNLTD ARP5316 INSP BY: jhn 12/26/2007									

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PAGE 1

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WIRE TRANSFERS: CHECK PAYMENTS:

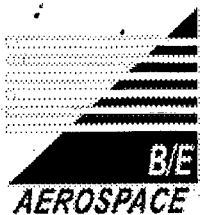
KAPCO|VALTEC

CERTIFICATE OF CONFORMANCE

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CONFORMANCE IS ON FILE AND AVAILABLE FOR REVIEW UPON REQUEST.

Doug Creelman
DOUG CREELMAN
DIRECTOR OF CORPORATE QUALITY

Thank You For This Order
PACKING LIST



B/E Aerospace, Inc.

Page: 1 of 1

CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO24464

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
5	10	EA	MS20819-12J		P00020481-21038	NELSON AEROSPCE/PERM 52930			


Jason Lewis
Vice President of Quality

06/04/14



9356 1/2 San Fernando Road, Unit B • Sun Valley, CA 91352
(818) 504-0677 • FAX (818) 504-1559

SOLD TO: PERMASWAGE/NELSON AEROSPACE
10310 NORRIS AVENUE
PACOIMA, CA 91331
(818) 686-0900

TERMS: net 30

DATE CERTIFIED: 07-18-2012	DATE RECEIVED: 07-18-2012	DATE TESTED: 07-18-2012	CUSTOMER P.O. 24071	PACKAGING METHOD 19 Box
U1965 357# AS5176J12 SLEEVE-COUPLING PASS HIGH HUMIDITY ENV J/N# F00020481 LOT# F00020481-21038 High Humidity 32 pcs Acc: 32 Rej: 0 24 HOURS HIGH HUMIDITY TEST				
MATERIAL / HEAT TREAT / STATUS OF PARTS 304				TOTAL

PASSIVATE MIL-STD-753C METHOD 101/AMS2700E METHOD 1 TYPE 6 CLASS 1

Other

MAGNETIC SPECIFICATIONS

Acceptance Criteria

Accepted	Rejected	Accepted	Rejected	Accepted	Rejected	Accepted	Rejected	Accepted	Rejected	Accepted	Rejected	Accepted	Rejected

Reason Rejected

FLUORESCENT PENETRANT SPECIFICATIONS

Acceptance Criteria

Accepted	Rejected	Accepted	Rejected	Accepted	Rejected	Accepted	Rejected	Accepted	Rejected	Accepted	Rejected	Accepted	Rejected

Reason Rejected

QC NOT Level 2: REYES HERNANDEZ

LOT: F00020481-21038

This test certification shall not be reproduced except in full. This certification shall not be used by the customer to claim product endorsement by any agency of the U.S. government. Active Magnetic Inspection certifies that the product shipped on the above certification were processed, inspection & tested in compliance with all applicable prints & specifications. All supporting documentation is on file at Active Magnetic Inspection.

Reyes Hernandez
CERTIFIED LEVEL II INSPECTOR

CERTIFICATION / TEST / REPORT

Order No: 3370165
Time 06:39:29

FRY STEEL COMPANY
Registered ISO 9001
13325 MOLETTE ST.
SANTA FE SPRINGS, CA 90670
(562) 802-2721

N00580
Cust. NO.: 21038 - FAX
P.O. NO.:

CERTIFICATE OF COMPLIANCE

NELSON AEROSPACE INC
10310 NORRIS AVE
ONE PO # ORDER***
PACOIMA CA 92683-5218

03/05/12

QTY	-DESCRIPTION-	-ITEM CODE-	-HEAT NUMBER-
	CG 304 ANN AMS 5639 COND A PINK/WHITE		
97	BARS 1"RD	12'RL	42680
	*ONE HEAT		742242 ✓

NOTICE

A COPY OF THE ORIGINAL MILL CERTIFICATION IS ATTACHED*

CHEMICALS & PHYSICALS ARE REPORTED THAT WILL MEET THE SPECIFICATIONS SHOWN ON THE CERTIFICATE.
EXCEPTIONS TO SPECIFICATIONS SHOULD BE SHOWN ON THE CERTIFICATION.

AUTOMATIC EXCEPTIONS TO THE SPECS LISTED ARE: LINE MARKING AND INSPECTION (I.E. MAG., SONIC, ETC.)

WE SUGGEST CONSULTING AN EXPERT ABOUT RELATED INSPECTION, PRIOR TO ALTERING THE MATERIAL FROM THE AS SHIPPED/RECEIVED
CONDITION. "DEFECT FREE" MATERIAL CAN NOT BE GUARANTEED WITHOUT PRIOR INSPECTION APPROPRIATE TO APPLICATION.

**NO WELD REPAIR HAS BEEN PERFORMED AND THIS MATERIAL IS FREE FROM MERCURY AND RADIUM
CONTAMINATION AT TIME OF SHIPMENT**

The willful recording of false, fictitious or fraudulent statements on this document may result as a felony under federal statutes
*WHEN APPLICABLE

Chip Sandoval
CHIP SANDOVAL - Q.C. MANAGER

LOT: F00020481-21038

CERTIFICATE OF TESTS

ABNAHMEPRUEFZEUGNIS

CERTIFICAT DE CONTROLE

CERT SERIAL# 000791570



Talley Metals Technology, Inc.

205 Talley Metals Lane

McBee, SC. 29101 Tel: (610) 208-2000 (800) 338-4592

09/20/11

CUSTOMER/BESTELLER/CLIENT

FRY STEEL COMPANY

PO BOX 4048

SANTA FE SPRING CA 90670

- THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47.
- THE VALUES AND OTHER TECHNICAL DATA REPRESENT THE RESULTS OF ANALYSES AND TESTS MADE ON SAMPLES COLLECTED FROM THE TOTAL LOT. ORIGINAL DATA RECORDS CAN BE TRACED BY REFERENCE TO THE CARPENTER ORDER NUMBER.
- MATERIAL IS MANUFACTURED FREE FROM MERCURY, RADIUM, ALPHA AND GAMMA SOURCE CONTAMINATION.
- THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF CARPENTER TECHNOLOGY CORPORATION.

SELLER/VERKÄUFER/VENDEUR PAGE 1 OF 2

HVL

CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NO./WERKS-NR./N° DE REFERENCE INTERNE	DATE/DAUM/DATE	WEIGHT/GEWICHT/POIDS
46638-10-007	W43552	09/20/11	10629.000

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE:

742242✓

UNS NUMBER S30403

PRODUCT DESCRIPTION: TYPE 302/304/304L STAINLESS ANNEALED CENTERLESS GROUND
----- PART NUMBER: S# 42680

SPECIFICATION: FRY STEEL 304LT2A (04/30/03)

QQ-S-763F (06/27/96)

MIL-S-7720A AMD 2 (07/26/74) (302 ONLY)

AMS 5639 REV H (07/ /02) (304 ONLY)

AMS 5647 REV J (05/ /11) (304L ONLY)

ASTM-A193-11 GRD B8 (CL 1 EXCEPT PARA 7.3.1) (304 ONLY)

ASTM-A276-10

ASTM-A320-11 GRD B8 (CL 1 EXCEPT PARA 4.3.1) (304 ONLY)

ASTM-A479-10A

ASTM-A484-11

ASME-SA479 2010 EDITION

AMS-S-7720 (10/ /07) (302 ONLY)

AMS-QQ-S-763B (08/ /06)

SIZE 1.000000 IN. (25.40 MM) RD BAR

PRIMARY HEAT CHEMISTRY (WT%): (TEST METHOD IS SHOWN IN PARENTHESIS)

C (COM)	MN (XRF)	SI (XRF)	P (XRF)	S (COM)	CR (XRF)
0.019 ✓	1.70 ✓	0.62 ✓	0.026 ✓	0.026 ✓	18.24 ✓
NI (XRF)	MO (XRF)	CU (XRF)	CO (XRF)	N (FUS)	
8.48 ✓	0.42 ✓	0.32 ✓	0.40 ✓	0.070 ✓	

INTERGRANULAR CORROSION TESTED TO ASTM-A262, PRACTICE E - ACCEPTABLE.

ANNEALED MICROSTRUCTURE FREE FROM CONTINUOUS GRAIN BOUNDARY CARBIDE

PRECIPITATION (NETWORK).

THIS MATERIAL CONFORMS TO THE TECHNICAL REQUIREMENTS OF THE AMS SPECIFICATION REFERENCED ABOVE.

THIS MATERIAL IS CAPABLE OF CONFORMING TO THE TECHNICAL REQUIREMENTS OF ASTM A 182.

EDDY CURRENT TEST PERFORMED

DISCS MACROETCHED AND APPROVED

GRAIN SIZE PER ASTM E112: 4

LOT: F00020481-21038

CONTINUED ON NEXT PAGE

CERTIFICATE OF TESTS
CERT SERIAL# 000791570

ABNAHMEPRUEFZEUGNIS

CERTIFICAT DE CONTROL



TALLEY METALS
A Carpenter Company

Talley Metals Technology, Inc.
285 Talley Metals Lane
McRae, SC. 29101 Tel: (610) 204-2000 (800) 338-4592

- THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING, FEDERAL LAI, TITLE 18, CHAPTER 47.
- THE VALUES AND OTHER TECHNICAL DATA REPRESENT THE RESULTS OF ANALYSES AND TESTS MADE ON SAMPLES COLLECTED FROM THE TOTAL LOT. ORIGINAL DATA RECORDS CAN BE TRACED BY REFERENCE TO THE CARPENTER ORDER NUMBER.
- MATERIAL IS MANUFACTURED FREE FROM MERCURY, RADIUM, ALPHA AND GAMMA SOURCE CONTAMINATION.
- THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF CARPENTER TECHNOLOGY CORPORATION.

09/20/11

CUSTOMER/BESTELLER/CLIENT

SELLER/VERKAUFER/VENDEUR PAGE 2 OF :

FRY STEEL COMPANY

PO BOX 4048
SANTA FE SPRING CA 90670

HVL

CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NO./MERKS-NR./N° DE REFERENCE INTERNE	DATE/DATUM/DATE	WEIGHT/GEWICHT/POI
46638-10-007	W43552	09/20/11	10629.00

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE :

✓ 742242

UNS NUMBER S30403

(T) TRANSVERSE (L) LONGITUDINAL
YIELD STRENGTH, (0.20 %) KSI (MPA) ✓ L
TENSILE STRENGTH, KSI (MPA) ✓ 46.3 (319)
ELONGATION IN 2.00", % ✓ 57.5 (603)
REDUCTION OF AREA, % ✓ 60.0
HARDNESS, HBW ✓ 74.0
165.0



NO WELD REPAIR PERFORMED

MATERIAL PRODUCED ON THIS ORDER WAS MELTED AND MANUFACTURED IN THE U.S.A. MATERIAL HAS BEEN MELTED IN USA OR QUALIFYING COUNTRY TO DFARS REQUIREMENTS 252.225-7014 WITH ALTERNATE 1 FOR QUALIFYING COUNTRY 225.872.1, SUPERSEDED BY DFARS REQUIREMENTS DFARS 252.225-7008 AND 252.225-7009. THIS ORDER WAS MANUFACTURED IN ACCORDANCE WITH CARPENTER SPECIALTY ALLOYS OPERATIONS QUALITY PROGRAM MANUAL, REVISION 29 DATED 09/01/10.

WE HEREBY CERTIFY THAT THE ABOVE TEST DATA ARE IN ACCORDANCE WITH THE PURCHASE ORDER AND SPECIFICATION REQUIREMENTS. CERTIFICATE OF TEST IS PREPARED IN ACCORDANCE WITH PARAGRAPH 3.1 OF EN 10204 (DIN50049)

TIMOTHY DUVAL
QUALITY ASSURANCE REP.
CARPENTER TECHNOLOGY CORPORATION

FRY STEEL CO. CERTIFIES THAT THIS IS
A TRUE COPY OF THE ORIGINAL MILL TEST
REPORT NOW ON FILE
RECEIVED AND INSPECTED

OCT 05 2011

BY
TIMOTHY DUVAL - Q.A. MANAGER

LOT: F00020481-21038

Timothy M. Duval



B/E Aerospace, Inc.

Page: 1 of 1

CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO24464

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
1	50	EA	MS27039C1-14		116766	3V FASTENERS	1ER65		


Jason Lewis
Vice President of Quality

06/04/14



3-V FASTENER CO., INC.

3-V Fastener Co., Inc.
320 Reed Circle
Corona, CA 92879
Tel: 951-734-4391
Fax: 951-734-0127
www.3VFasteners.com

PACKING LIST

SHIPPED TO:

B/E AEROSPACE

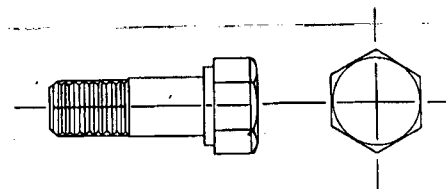
9835 NW 14TH STREET
MIAMI FL 33172

CUSTOMER	OUR ORDER NO.	PICK SLIP NO.	YOUR ORDER NO.	DATE PRINTED
141327	107967	1466106	0EZK65	05/18/2012

1.000	MS27039C1-14 <i>Qty. 3</i>	S5P1R2 R#116766	116766	52,375
				52,375

**FASTENERS**

PRECISION AEROSPACE FASTENERS

a **PEM**® Company320 Reed Circle • Corona, CA 92879
Tel: 951-734-4391 • FAX: 951-734-9488**TEST CERTIFICATION**

Cert # : 53571 Cert Date: 05/18/12 LOT #: 116766 Page: 1
Cust # : 141327 MFG 2-28-12
Customer : B/E AEROSPACE P.O. #: 0EZK65
Ship To : MIAMI, FL P.O. Qty: 52375
Part #: MS27039C1-14 Ship #: 1466106
Material Spec: AMS5731L Ship Qty: 52375
Type: A286 MFG. Part #: NASM27039C1-14 REV.3
Code: 13218 Heat #: 47FH
Mill, Vendor: ALLVAC / BROWN PACIFIC
Procure Spec: NASM7839 REV.1

Metallurgical Tests
Hardness: N/A

Grain Size: N/A Decarb: NONE

Metallurgical, Special Process and Subcontracted Test Information
THREADS INSPECTED PER MIL-S-8879C N.3, AS8879D OR MIL-S-7742D A.1
MAG PERM <2.0 PER ASTM A 342/A 342M 04 MET.3
MACRO AND MICROSTRUCTURE SATISFACTORY 32 PCS
HEAT TREAT PER AMS2759/3E BY CONTINENTAL #114052
PASSIVATE PER AMS2700E MET.1 TY2 CL1 BY ACTIVE #115007

Tensile per NASM1312-8
Minimum Requirement: 2500 LBS

Load :	4052	4080	3993	3983	4088
Failure:	THD	THD	THD	THD	THD
Load :	4049	3998	4074	4053	4043
Failure:	THD	THD	THD	THD	THD
Load :	4011	4024	4089	4074	4020
Failure:	THD	THD	THD	THD	THD
Load :	4006	4023	4035	4015	4005
Failure:	THD	THD	THD	THD	THD
Load :	4083	4032	4027	3994	4061
Failure:	THD	THD	THD	THD	THD
Load :	4040	4056	4044	4024	4053
Failure:	THD	THD	THD	THD	THD
Load :	4030	4052	0	0	0
Failure:	THD	THD			



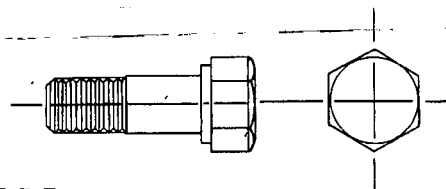
3V™ FASTENERS

PRECISION AEROSPACE FASTENERS

a **PE**® Company

320 Reed Circle • Corona, CA 92879

Tel: 951-734-4391 • FAX: 951-734-9488



TEST CERTIFICATION

Page: 2

Customer: B/E AEROSPACE

LOT #: 116766

Cert #: 53571

THIS TEST CERTIFICATION SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT WRITTEN APPROVAL OF 3V FASTENERS CO., INC. TESTING LABORATORY.

THIS CERTIFICATION SHALL NOT BE USED BY THE CUSTOMER TO CLAIM PRODUCT ENDORSEMENT BY ANY AGENCY OF THE U.S. GOVERNMENT.

3V FASTENERS CERTIFIES THAT THE PRODUCT SHIPPED ON ABOVE PURCHASE ORDER WERE MANUFACTURED, INSPECTED AND TESTED IN COMPLIANCE WITH ALL APPLICABLE PRINTS AND SPECIFICATIONS. ALL SUPPORTING DOCUMENTATION IS ON FILE AT 3V. ACCREDITED TO AS9100C, REGISTERED ISO 9001:2008 + AS9100B.

SAI GLOBAL CERT-0049384, CAGE CODE 1ER65, COO:USA

BAE APPROVAL BAE/AG/30148/CAL, AIRBUS APPROVAL 30085.

THE RAW MATERIAL USED TO MANUFACTURE THESE PARTS WAS MELTED IN THE USA OR A QUALIFYING COUNTRY AND COMPLIES WITH THE APPLICABLE SECTIONS OF DFARS 252-225.

QUALITY ASSURANCE LAB SUPERVISOR

Daniel E. Henson 5-18-12

DANIEL E. HENSON

PART NUMBER	REV.	LOT #	LOT SIZE	SAMPLE SIZE
MS27039C1-14	3	116766	52900	500-32

DESC: CRUCI PAN HD EXT.	PRINT NUMBER	SAMPLING PLAN
10/32 X .906	NASM27039	ANSI Z1.4, GL II / S-3

PRINT CHARACTERISTIC	PRINT REQ.	ACTUAL	ACC.	REJ.	GAGE EQUIPMENT
HEAD MARKING	27039C1-14 LOGO	27039C1 - 14 Logo	✓		VISUAL/10X
LENGTH +.032-.015	.938-.891	919-914	✓		CALIPER
GRIP LENGTH +-.015	.453-.423	435-433	✓		CALIPER/OPT.COMP.
THREAD PITCH DIA.	.1697-.1674	1685-1680	✓		TRI-ROLL
THREAD FUN. DIA.	.1697-.1674	1686-1684	✓		TRI-ROLL/RING GAGE
THREAD MAJOR DIA.	.1900-.1840	1858-1843	✓		MICROMETER
THREAD ROOT RADIUS	N/A	—			OPTICAL COMPARATOR
THREAD MINOR DIA.	N/A	—			TRI-ROLL/OPT.COMP.
GRIP DIAMETER	.1890-.1860	1878-1864	✓		MICROMETER/OPT COMP
HEAD DIMENSION	.373-.357	370-369	✓		CALIPER
BEARING SURFACE DIA.	N/A	—			OPTICAL COMPARATOR
BEARING SURF. HGT.	N/A	—			OPTICAL COMPARATOR
RADIUS UNDER HEAD	.020-.010	016-014	✓		OPTICAL COMPARATOR
HEAD HEIGHT	.133-.122	132-129	✓		CALIPER/MICROMETER
SOCKET/RECESS DEPTH	.124 MAX.	<124	✓		HEIGHT STAND
SOCKET/RECESS WIDTH	.199-.186	198-190	✓		CALIPER/PIN GAGE
SOCK./RECESS GAGING	.113-.089	104-099	✓		PENETRATION GAGE
FIN THD, B/S, RAD, GRIP	32/RA MAX.	<32	✓		COMPARATOR GAGE/10X
FIN. ALL OTHERS	125/RA MAX.	<125	✓		COMPARATOR GAGE/10X
BURRS/SHARP EDGES	NONE ALLOWED	NONE	✓		VISUAL/10X
BEARING SURF. SQ.	2 DEG. MAX.	1'	✓		OPTICAL COMPARATOR
SHANK STRAIGHTNESS *	.0040 TIR	<.0040	✓		CONCE. GAGE/SUR. PLT

 INSP. PERFORMED &
ACCEPTED BY:


DATE: 4-27-12

REPORT PREPARED BY: DAN HENSON

NEW

DATE: September 30, 2010 855548

FORM 11-1, REV 5 03/17/98

NOTES:

1. * = PER INCH OF LENGTH



551629
4-24-12 115007
3V
INSP
08

9356 1/2 San Fernando Road, Unit B • Sun Valley, CA 91352
(818) 504-0677 • FAX (818) 504-1559

SOLD TO: 3V FASTENERS
320 REED CIRCLE
CORONA, CA 92879
(951) 734-4391

TERMS: net 30

DATE CERTIFIED: 04-24-2012	DATE RECEIVED: 04-24-2012	DATE TESTED: 04-24-2012	CUSTOMER P.O. 115007/00793206	PACKAGING METHOD 10 Pan					
53111 495# MS27039C1-14 CROSS RECESS PASS COPPER SULFATE									
PAN HD EXT. NASM R/N# 116766-110.00 Copper Sulfate 32 pcs Acc: 32 Rej: 0									
<div style="border: 1px solid black; padding: 5px; text-align: center;">RECEIVED APR 24 2012 By _____</div>									
MATERIAL / HEAT TREAT / STATUS OF PARTS A-286									

PASSIVATE 102-AMS-STD-753/AMS2700E METHOD 1 TYPE 2 CLASS 1

Other

MAGNETIC SPECIFICATIONS

Acceptance Criteria

Accepted	Rejected	Accepted	Rejected	Accepted	Rejected	Accepted	Rejected	Accepted	Rejected	Accepted	Rejected	Accepted	Rejected

Reason Rejected

FLUORESCENT PENETRANT SPECIFICATIONS

Acceptance Criteria

Accepted	Rejected	Accepted	Rejected	Accepted	Rejected	Accepted	Rejected	Accepted	Rejected	Accepted	Rejected	Accepted	Rejected

Reason Rejected

QC NDT Level 2: REYES HERNANDEZ

This test certification shall not be reproduced except in full. This certification shall not be used by the customer to claim product endorsement by any agency of the U.S. government. Active Magnetic Inspection certifies that the product shipped on the above certification were processed, inspection & tested in compliance with all applicable prints & specifications. All supporting documentation is on file at Active Magnetic Inspection.

Reyes Hernandez
CERTIFIED LEVEL III INSPECTOR

CERTIFICATION / TEST / REPORT



10643 S. NORWALK BL.
SANTA FE SPRINGS
CALIFORNIA 90670
562-944-8808
800-622-6624
FAX 562-944-1499
www.continentalht.com

CERTIFICATION

114052
CERTIFICATION NUMBER
602498

3 V FASTENERS
320 REED CIRCLE
CORONA, CA 92879-1349



3 V FASTENERS
320 REED CIRCLE
CORONA, CA 92879-1349

4-4-12

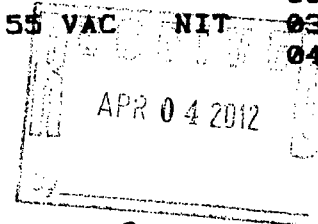
CUSTOMER NUMBER 0450045	DATE RECEIVED 03/16/12	CUSTOMER P.O. NUMBER 114052/114056	CUSTOMER SHIPPER
----------------------------	---------------------------	---------------------------------------	------------------

QUANTITY	WEIGHT	PART NUMBER / DESCRIPTION	
53091	495	MS27039C1-14 RTR# 116766-40	10 PANS
		PO# 00789846	
53256	365	MS27039C1-09 RTR# 110866-20	7 PANS
		PO# 00789847	
SOLUTION & PRECIPITATION H/T, 130 KSI MIN PER P.O.			

MATERIAL A286	HARDNESS 24-36 HRC	MAX-CROSS SECTION .180	CASE DEPTH	CORE HARDNESS
------------------	-----------------------	---------------------------	------------	---------------

SPECIFICATIONS AMS 2759/3 E ASTM A 380-06 (ABRASIVE BLASTING)

PROCESS	SPEC TEMP	SPEC TIME	EQUIP.	ACT TEMP	TIME IN	TIME AT-HEAT	TIME OUT	ATMOS DEWPT	Q-MED & TEMP	DATE
RACK			RACK		.16	Y				03/24
LOADCOUPLE			WIRE		.08	Y				03/24
SET V P			ATMOS		.02	Y				03/24
SOLUTION	1800	2:00	V1	1800	04:55	08:40	10:40	VAC	OIL	03/24
LOADCOUPLE			WIRE		.08	Y				03/31
SET V P			ATMOS		.02	Y				03/31
NI AGE	1325	16:00	V10	1325	06:00	10:55	02:55	VAC	NIT	03/31
GLASS BEAD			B6		4.00	Y				04/03
LOAD: 02										
RACK			RACK		.33	Y				03/26
PRECLEAN	140	:05	WASH	140	14:00	14:00	14:05	AIR	A/C	03/26
LOADCOUPLE			WIRE		.08	Y				03/26
SET V P			ATMOS		.02	Y				03/29
SOLUTION	1800	2:00	V1	1800	20:44	01:10	03:10	VAC	OIL	03/29
LOADCOUPLE			WIRE		.08	Y				03/31
SET V P			ATMOS		.02	Y				03/31
NI AGE	1325	16:00	V10	1325	06:00	10:55	02:55	VAC	NIT	03/31
GLASS BEAD			B2		4.50	Y				04/03



LOAD 01 HARDNESS:27-30 HRC QTY TESTED:32 QTY ACCT:53091 QTY REJT: 0 LOAD
02 HARDNESS:25-28 HRC QTY TESTED:32 QTY ACCT:53256 QTY REJT: 0

SPECTOR
RANDALL THOMAS

DATE
04/04/12

QUALITY MANAGER
JIMMY MARTINEZ FOR DON LOWMAN

Process Certification covers thermal processing and/or hardness testing only. No particular mechanical properties of any material should be assumed, or are implied, as a result of the thermal processing and/or hardness testing cited in this Process Certification. Material processed in a mercury-, radium- and asbestos-free environment. Unless otherwise specified above, for all AMS material specifications, no qualification or periodic testing has been performed. L FURNACES CERTIFIED TO MEET THE REQUIREMENTS OF AMS-H-6875, CURRENT REVISION. HARDNESS TESTING PERFORMED TO THE LATEST EDITION OF ASTM E 384, ASTM E 10, ASTM E 110, ASTM E 18, ASTM E 140 AND ASTM A 370.



BROWN-PACIFIC, INCORPORATED
13639 BORA DR. / SANTA FE SPRINGS / CALIFORNIA 90670
(562) 921-3471 • (562) 921-7012 FAX

MATERIAL TEST REPORT

13218

F.O.B.	SHIP VIA	JOB NO.	INVOICE NO.
SFS	WILL CALL		-0-76482 01-16-12
SHIP TO	3-V FASTENERS 320 REED CIRCLE CORONA, CA 92879-1349	ORDER DATE	THIS MATERIAL WAS MANUFACTURED AND TESTED IN CONFORMANCE WITH THE NOTED SPECIFICATIONS. THE INFORMATION PRESENTED HEREIN IS CORRECT AS CONTAINED IN THE COMPANY RECORDS. FACILITY IS MERCURY & RADIOACTIVE FREE. BY: <i>G. Moreno</i> G. MORENO, LAB
		CUST. P.O. NO.	
		DUE DATE	
SOLD TO	3-V FASTENERS 320 REED CIRCLE CORONA, CA 92879-1349	12/30/11	1/11/2012 GM
		4 coils	
		699#	
PRODUCT ORDERED		QTY. ORDERED	
0.328 DIA TYPE A-286 CONVERTED TO 0.186/0.187 DIA SEAMSAFE COPPER COATED COIL		650	KNOWINGLY OR WILLFULLY RECORDING FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL LAW, TITLE 18, CHAPTER 47.

SPECIFICATIONS

M-001-S/S REV 20(W/EXCEPTIONS PER LETTER DATED 10/04/11) CAP OF AMS
5731J 5732J 5734K 5737P CHEM ONLY AMS 5853C 13/17% CR

GRADE	MILL NO.	HEAT NO.
A-286	18	47FH

CHEMICAL ANALYSIS

C: .028 / AL: .23 /
MN: .22 / TI: 2.15 /
P: .016 / B: .008 /
S: <.0003 / CB:
SI: .06 / TA:
NI: 24.36 / CB+TA:
CR: 14.44 / CU: .08 /
MO: 1.13 / SE:
CO: .14 / N:
V: .20 / FE: 56.93
CA: PB: <.0001
MG: BI: <.00001
ZR<.01

ASTM GRAIN SIZE: 7/8 /
ALLVAC, USA /

MACRO:
MICRO:
OTHER:

SA. 1.149
1-13-12 2.193
4 coils 3.178
4.183

MECHANICAL PROPERTIES AND CAPABILITY

AS SHIPPED PROPERTIES	TENSILE, KSI	118.1	YIELD, KSI	% ELON	
	% RA		HARDNESS	SHEAR, KSI	
ETT °F	TENSILE, KSI		YIELD, KSI	% ELON	% R.A.
STRESS RUPTURE	TEMP °F	1200F	STRESS, KSI	65	HOURS 48.8 % ELON 41.5
	TEMP °F	1200F	STRESS, KSI	70	HOURS 49.0 % ELON 20.4
H.T. PROCEDURE					
1650F 2HRS W/Q, 1325F 16HRS A/C					
	TENSILE, KSI	163.1	YIELD, KSI	107.4	% ELON 31.7
	% R.A.	43.3	HARDNESS	RC 34	SHEAR, KSI
H.T. PROCEDURE					
1800F 1HR W/Q, 1325F 16HRS A/C					
	TENSILE, KSI	166.1	YIELD, KSI	108.9	% ELON 23.6
	% R.A.	43.8	HARDNESS	RC 34	SHEAR, KSI
H.T. PROCEDURE					
1250F 8HRS A/C					
	TENSILE, KSI	184.0	YIELD, KSI	160.3	% ELON 20.0
	% R.A.	51.6	HARDNESS	RC 35	SHEAR, KSI

13218

Traveler(s) 51023 A Heat # 47FH Ingot#

CERTIFICATE OF TEST

ATI Allvac
4374 Lancaster Highway
Richburg, SC 29729
Phone (803) 789-3595

Prof 1 Rev 2

Customer Name
BROWN PACIFIC INC.
13639 Bora Drive
Santa Fe Springs, CA

Purchase Order
M2682AF-301

Size .3280" Rd. Alloy A-286

PCS 25

Weight 17748



Date: 12/13/2011 Quality Auditor: Chad Evans

Chad Evans

CONDITION SHIPPED

SURFACE: Hot Rolled; Descaled

HEAT TREAT: Mill Annealed / Direct Quenched

SPECIFICATIONS

S-400	10/10/2008	S-4001	10/26/10
-------	------------	--------	----------

HEADER REMARKS

Capability: AMS 5731 Rev. L
Chemistry only: AMS 5853 Rev C
Capable of AMS 7235 Rev. D

AMS 5732 Rev J
C50T35 Rev S4 Am7

AMS 5734 Rev K
AMS 5737 Rev P
ASTM A-453 Rev 2010 Type 660

	C	S	Mn	Si	Cr	CR EQ	Mo	Co	Ti	Al	B	Zr
HEAT AVG	.028	<.0003	.22	.06	14.44	-	1.13	.14	2.15	.23	.008	<.01

CR EQ = Chromium Equiv

Cb = Nb

13218

Traveler(s) Heat # Ingot#
 51023 A 47FH ATI Allvac 4374 Lancaster Highway Richburg, SC 29729 Phone (803) 789-3695 Page 2 of 6

	Fe	Cu	Ni	P	Cb	Ta	W	V	Cb+Ta	Ti+Al	Ni+Co	Y
HEAT AVG	56.93	.08	24.36	.016	.03	<.01	.02	.20	.03	2.38	24.5	-

CHEMISTRY (TRACE)

	Bi	Ca	Pb	Se	Ag	Sb
HEAT AVG	-	-	-	-	-	-
LADLE AOD	<.00001	<.0010	<.0001	<.00005	.0001	.0004

3V
LAB
06

CHEMISTRY METHOD

WET-PB
 WET-BI
 WET-SE
 WET-SB
 OES-CA
 OES-AG
 CS-CS
 OES-B
 XRF-FE(FEBAL)

ELEMENTS TESTED BY METHOD

PB
 BI
 SE
 SB
 CA
 AG
 C,S
 B
 MO,W,CR,NI,CO,CU,P,NB,TA,ZR,MN,V,TI,AL,Si,FE

CHEMISTRY REMARKS

Chemistry tested at ATI ALLVAC unless otherwise noted.

CHEMISTRY ANALYTICAL METHODS

CS = Combustion/IR Detection

GAS = Inert Gas Fusion

OES = Spark Optical Emission

XRF = X-Ray Fluorescence

WET = Graphite Furnace Atomic Absorption (SE) Mass Spectroscopy (PB,BI,SB)

13218

er(s) Heat # Ingot#
A 47FH

ATI Allvac 4374 Lancaster Highway

Richburg, SC 29729

Phone (803) 789-3595

Page 3 of 6

Capability Tensile Test

Ingot	Heat Treat Code	Test Dir	Temp F	UTS ksi	.2% Yield ksi	.02% Yield ksi	%EL 4D	5D	%RA	Gage Length 4D	5D	Tensile Diameter	Tested At
	1650EK	LC	ROOM	163.1	107.4		31.7		43.3	.64		.160	ACUREN
	1800MB	LC	ROOM	166.1	108.9		23.6		43.8	.64		.160	ACUREN
	48A	LC	ROOM	91.8								.331	ACUREN

3V
LAB
06

at Dir: L = Longitudinal, T = Transverse, ST = Short Transverse, LT = Long Transverse,

TC = Transverse Center At Size, TM = Transverse Mid-Radius At Size,

PC = Pancake, DB = Drawbar, PD = Paddle, TT = Top Transverse At Size,

BT = Bottom Transverse At Size, LC = Long Center, TX = Top Transverse Mid-Radius At Size,

LM = Longitudinal Mid Radius, LS = Longitudinal Surface, TS = Transverse Surface

eration: SUPER = Crosshead Sep Rate of .10 inches/minute

Capability Stress Rupture

Test Dir	Temp F	Load Ksi	Life Hrs	Upld1 Ksi	Life Hrs	Upld2 Ksi	Life Hrs	Upld3 Ksi	Life Hrs	Upld4 Ksi	Life Hrs	Upld5 Ksi	Life Hrs	Upld6 Ksi	Life Hrs	Upld7 Ksi	Life Hrs	%EL 4D	5D	%RA	Bar Diam	Type Bar
LC	1200	65	48.8	70	61.2	75	70.2	80	83.2	85	90.8	-	-	-	-	-	-	41.5			.1785	CSN
.005	BAR RUPTURED IN THE SMOOTH SECTION										Tested At ACUREN											
LC	1200	70	49.0	75	58.9	80	67.8	85	79.8	-	-	-	-	-	-	-	-	20.4			.1785	CSN
.005	BAR RUPTURED IN THE SMOOTH SECTION										Tested At ACUREN											

Longitudinal, T = Transverse, ST = Short Transverse, LT = Long Transverse, TC = Transverse Center at size, TM = Transverse Mid-Radius At Size,

Pancake, DB = Drawbar, PD = Paddle, TT = Top Transverse At Size, BT = Bottom Transverse At Size, LC = Long Center, TX = Top Transverse

Mid-Radius At Size, LM = Longitudinal Mid Radius, LS = Longitudinal Surface, TS = Transverse Surface

SR = Smooth, CN = Center Notch, CSN = Combination Smooth and Notch

CAPABILITY HARDNESS

Ingot	Heat Treat Code	Hardness val	Hardness Type	Tested At
	1650EK	34	HRC	ACUREN
	1800MB	34	HRC	ACUREN
	48A	82	HRBW	ACUREN

13218

3V
LAB
06

Traveler(s) Heat # Ingot#
51023 A 47FH

ATI Alivac 4374 Lancaster Highway

Richburg, SC 29729

Phone (803) 789-3595

Page 4 of 6

TENSILE/STRESS RUPTURE HEAT TREATMENT

HT Code: 1650EK				Furnace	
Location	Temp			Cool Rate	
	F	Hours	Mins	Per Hrs	Cool
				(F)	Code
PLANT					
MILL ANNEALED / DIRECT QUENCHED					
LAB	1650	2			WQ
LAB	1325	16			AC

HT Code: 1800MB				Furnace	
Location	Temp	Hours	Mins	Cool Rate	Cool
	F			Per Hrs	
(F)					
PLANT					
MILL ANNEALED / DIRECT QUENCHED					
LAB	1800	1			WQ
LAB	1325	16			AC

HT Code: 48A				Furnace		
Location	Temp		Hours	Mins	Cool Rate	Cool Code
	F				Per Hrs (F)	
PLANT						MILL ANNEALED/DIRECT QUENCHED

MECHANICAL REMARKS

The tensile and hardness performed for Heat Treat Code 48A are As Shipped tests.

METALLOGRAPHY

GRAIN SIZE (As shipped cond.): Avg. ASTM 9

Tested at Acuren

MACRO

Material has been macro inspected and ultrasonic tested at intermediate billet to clear melt-type (piping, inclusions, etc.) defects.

REMARKS

13218

3V
LAB
06

veiler(s)

Heat #

Ingot#

A

47FH

ATI Allvac 4374 Lancaster Highway

Richburg, SC 29729

Phone (803) 799-3595

Page 5 of 6

rial has been produced, sampled, inspected, and tested in accordance with the customer purchase order and
renced specifications and conforms to the requirements unless otherwise noted in this certificate of

deviations to specification or customer purchase order requirements relative to testing, test values, hot
ing fixed practices, have been resolved in writing with customer prior to shipment.

recording of false, fictitious, or fraudulent statements or entries on this document may violate Federal
utes, including but not limited to Title 18, Chapter 47 of the United States Code, and may be punishable
felony.

ustomer purchase order does not specifically reference a revision to a specification, ATI Allvac will
to the latest revision on file and in effect at time of order placement.

methods are per the latest ASTM Standards, currently recognized industry practices; or as agreed upon
sen ATI Allvac and customer.

hemical elements analyzed and found to have values below the actual limits of detection may be reported
less than or reported at the detection level.

values are reported to the significant places called for in the specifications, rounding will be done in
dance with ASTM E-29.

is to certify that during manufacturing, handling, testing and inspection, this material did not come in
t contact with mercury or any device employing a single boundary of containment.

Certificate of Test shall not be reproduced except in full, without the written approval of ATI Allvac
lty.

old repair has been performed on this material.

ial Safety Data Sheets (MSDS) - View or print from our site: www.allvac.com. Printed copies available
quest from the ATI Allvac Sales Department.

ic products have not come in contact with radioactive, fertile or fissionable materials during
ufacturing or processing.

material was melted and manufactured in the United States of America. ✓

SPECIAL REMARKS

METHOD: AOD/ESR

13218

3V
LAB
06

Traveler(s)
51023 A

Heat #
47FH

Ingots

ATI Allvac 4374 Lancaster Highway

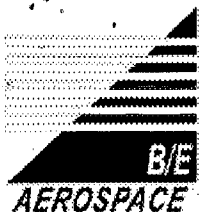
Richburg, SC 29729

Phone (803) 769-3595

Page 6 of 6

GEAR S-400 (GT193) supplier codes: Allvac Monroe - 87012, Allvac Lockport - T1226,
Acuren - T7605, Westmoreland T7869

TEST METHODS: C/S/O/N = ASTM E1019 (2008); XRF = ASTM E572 (2002A/2006*2), ASTM E1085 (2009),
ASTM E2465 (2006); OES = ASTM E415 (2008), ASTM E1086 (2008); RTT = ASTM E8/E8M (2009);
ETT = ASTM E21 (2009); Stress Rupture = ASTM E139 (2006), ASTM E292 (2009*1); Creep = ASTM E139 (2006);
Charpy = ASTM E23 (2007A*1); Fracture Toughness = ASTM E399 (2009*2); Rockwell Hardness = ASTM E18 (2008B);
Brinell Hardness = ASTM E10 (2010); ASTM E45 = ASTM E45 (2005*3); AMS 2300 = AMS 2300 (L); Grain Size =
ASTM E112 (2010), ASTM E930 (1999/2007), ASTM E1181 (2002/2008).



B/E Aerospace, Inc.

Page: 1 of 1

CONSUMABLES MANAGEMENT

P.O. Box 025263, Miami, FL 33102-5263 • Tel: 305.925.2600 • Fax: 305.507.7191
Plant Location: 10000 N.W. 15th Terrace, Miami, FL 33172 • SITA: MIAMMCR
www.beconsumables.com

Shipped From: 10000 NW 15 TERRACE, MIAMI, FL 33172


Material Certification

The items set forth on the purchase order referred to below have been visually inspected and the dimensions thereof have been measured by us, and based on the aforesaid, as well as the representation made to us by the manufacturers of the items subject of such purchase order, we hereby certify, that such items are in conformity with all current governmental and manufacturer's requirements, specifications, drawings, and conform to the purchase order requirements. Said items are in new condition and have not been obtained from any U.S. Government or Military source and are traceable to B/E Aerospace, Inc.

FIRM: DART AEROSPACE LTD

PURCHASE ORDER#: PO24464

LNE#	QUANTITY	U/M	PART-NUMBER	CUST REF#	LOT-NUMBER	MANUFACTURER	CCODE	MFR DATE	EXP DATE
2	100	EA	CR3553-4-02		87852289	CHERRY AEROSPACE SAN	11815		


Jason Lewis
Vice President of Quality

06/04/14



CHERRY®
AEROSPACE

SPS Fastener Division, a PCC Company

Cherry Aerospace
1224 East Warner Avenue
Post Office Box 2157
Santa Ana, CA 92707-0157
USA



PACKING LIST

Order No: S0377848
Order Date: 07/26/13
Print Date: 12/12/13

Page: 1/2



Sold-To: 10015341

Ship-To: 10015341

S O L D T O	B/E AEROSPACE
	PO BOX 025263
	MIAMI, FL 33102-5263
	USA

S H I P T O	B/E AEROSPACE
	PO BOX 025263
	MIAMI, FL 33102-5263
	USA

Salesperson (s):110

Purchase Order: 0RHY01

Credit Terms: NET 30
Net 30

Ship Via: FED EX NATIONAL CL

FOB: Origin - Collect

Remarks:

IF UNDER 150# SHIP FEDEX GROUND COLLECT ACCOUNT# 0331-0149-0
IF OVER 150# SHIP FED EX NATIONAL ACCOUNT# 018757 - DO NOT INSURE
DO NOT PREPAY AND ADD TO ANY OF THE ABOVE METHODS
DO NOT SHIP EARLIER THAN TWO (2) WEEKS PRIOR TO DUE DATE, UNLESS SPECIFIED.

BRITISH AEROSPACE APPROVAL# BAe/AG/30158/MAA to BAe/AG/QC/SC1 PART 3
AIRBUS APPROVAL# 30114

GOODS OF UNITED STATES ORIGIN

TEST REPORTS ENCLOSED

ECCN:EAR99

DO NOT DESTROY

*IF APPLICABLE, PART MEETS DFARS CLAUSE 252.225-7009 ALT I
*PREFERENCE FOR DOMESTIC SPECIALTY METALS

CHERRY DOES NOT ACCEPT QAP33 A.3 ITEM 3

Unless otherwise specified on this order, Cherry will manufacture and
certify parts to the part number's latest revision. Latest revisions are
shown at <https://bizpartner.cherryaerospace.com/partrevisions.htm> under

"Part Number Revision List".

REFERENCE PURCHASE ORDER DEVIATION REQUEST FORM DATED 7/31/12
RELEASE# WZ4FORHY01

Ln	Item Number	Site T Location	Lot/Serial	Qty Open Qty to Ship	UM	Promised Shipped	
1	CR3553-4-02 Customer Item: BACR15FR4M2R ASNA0078E402X	1600			EA	02/20/14	

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law is prohibited

Packing List



**CHERRY®
AEROSPACE**

SPS Fastener Division, a PCC Company

Cherry Aerospace
1224 East Warner Avenue
Post Office Box 2157
Santa Ana, CA 92707-0157
USA



PACKING LIST

Order No: S0377848
Order Date: 07/26/13
Print Date: 12/12/13

Page: 2/2

Sold-To: 10015341

Ship-To: 10015341

S O L D T O	B/E AEROSPACE
	PO BOX 025263
	MIAMI, FL 33102-5263
	USA

S H I P T O	B/E AEROSPACE
	PO BOX 025263
	MIAMI, FL 33102-5263
	USA

Ln	Item Number	Site T Location Lot/Serial	Qty Open Qty to Ship	UM	Promised Shipped
1	CR3553-4-02 CAN43079M4-2 MBBN3012M3602				
		B0303 87854046	4696.0	()	
		B0906 87857515	13772.0	()	
		C0303 87852289	15893.0	()	
		D0503 87827763	15964.0	()	
		E0105 87862056	16273.0	()	
		E0903 87858830	4100.0	()	
		G0803 87857906	6700.0	()	
		K0202 87857516	16214.0	()	
		K0204 87857905	6393.0	()	

**TEST REPORTS ENCLOSED
DO NOT DESTROY**

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law is prohibited

Packing List



CHERRY®
AEROSPACE

SPS Fastener Division, a PCC Company

Cherry Aerospace
1224 East Warner Avenue
Post Office Box 2157
Santa Ana, CA 92707-0157
USA



PACKING LIST

Order No: SO377848 Page: 1
Order Date: 07/26/13
Print Date: 12/12/13



Sold-To: 10015341

Ship-To: 10015341

S O L D T O	B/E AEROSPACE
	PO BOX 025263
	MIAMI, FL 33102-5263
	USA

S H I P T O	B/E AEROSPACE
	PO BOX 025263
	MIAMI, FL 33102-5263
	USA

Salesperson (s): 110

Purchase Order: ORHY01

Credit Terms: NET 30
Net 30

Ship Via: FED EX NATIONAL CL

FOB: Origin - Collect

Remarks:

IF UNDER 150# SHIP FEDEX GROUND COLLECT ACCOUNT# 0331-0149-0
IF OVER 150# SHIP FED EX NATIONAL ACCOUNT# 018757 - DO NOT INSURE
DO NOT PREPAY AND ADD TO ANY OF THE ABOVE METHODS
DO NOT SHIP EARLIER THAN TWO (2) WEEKS PRIOR TO DUE DATE, UNLESS SPECIFIED.

BRITISH AEROSPACE APPROVAL# BAe/AG/30158/MAA to BAe/AG/QC/SC1 PART 3
AIRBUS APPROVAL# 30114

GOODS OF UNITED STATES ORIGIN

ECCN: EAR99

TEST REPORTS ENCLOSED


DO NOT DESTROY

*IF APPLICABLE, PART MEETS DFARS CLAUSE 252.225-7009 ALT I
*PREFERENCE FOR DOMESTIC SPECIALTY METALS

CHERRY DOES NOT ACCEPT QAP33 A.3 ITEM 3

Unless otherwise specified on this order, Cherry will manufacture and
certify parts to the part number's latest revision. Latest revisions are
shown at <https://bizpartner.cherryaerospace.com/partrevisions.htm> under
"Part Number Revision List".

REFERENCE PURCHASE ORDER DEVIATION REQUEST FORM DATED 7/31/12
RELEASE# WZ4FORHY01

RELEASE# WZ4FORHY01							
Ln	Item Number	Site T Location	Lot/Serial	Qty Open Qty to Ship	UM	Promised Shipped	
1	CR3553-4-02 Customer Item: BACR15FR4M2R ASNA0078E402X	1600			EA	02/20/14	

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law is prohibited

CERTIFICATION

ATTENTION: PURCHASING DEPARTMENT

The material and/or parts we are furnishing in this shipment (as shown above) on the subject Purchase Order conform to the order and applicable specifications. Evidence that the material and/or parts meet the specifications and results of all tests for each lot affected will be in our files and will be available for your inspection at any reasonable time.

Quality Assurance Representative

Signed
SIM NGUYEN



CHERRY®
AEROSPACE

SPS Fastener Division, a PCC Company

Cherry Aerospace
1224 East Warner Avenue
Post Office Box 2157
Santa Ana, CA 92707-0157
USA



PACKING LIST

Order No: S0377848

Page: 2

Order Date: 07/26/13

Print Date: 12/12/13



Sold-To: 10015341

Ship-To: 10015341

S O L D T O	B/E AEROSPACE
	PO BOX 025263
	MIAMI, FL 33102-5263
	USA

S H I P T O	B/E AEROSPACE
	PO BOX 025263
	MIAMI, FL 33102-5263
	USA

Ln	Item Number	Site T Location Lot/Serial	Qty Open Qty to Ship	UM	Promised Shipped
1	CR3553-4-02 CAN43079M4-2 MBBN3012M3602				
		B0303 87854046	4696.0	()	
		B0906 87857515	13772.0	()	
		C0303 87852289			
		D0503 87827763	15893.0	()	
		E0105 87862056	15964.0	()	
		E0903 87858830	16273.0	()	
		G0803 87857906	4100.0	()	
			6700.0	()	
		K0202 87857516	16214.0	()	
		K0204 87857905	6393.0	()	

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CERTIFICATION

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Signed
SIM NGUYEN

[Signature]

**CHERRY AEROSPACE**1224 East Warner Avenue
Santa Ana, CA 92707-0157Accredited Chemical Processing
Heat Treating
ISO/IEC 17025
Material Testing Lab**Final Inspection & Test Report****CherryMax® Rivet****An ISO9001 and AS9100 registered company. OASIS #6111041606**

Part Numbers	Rev	Proc. Spec.	Rev	Lot I.D. No.: 87852289 Lot Size: 17,000 MFG. Date: August 19, 2013
CR3553-4-02		AC PS-CMR-3000	R	
** See 2nd Page for the Customer Parts				

ASSEMBLY DATA

TYPE	ID #	CERT #	MATERIAL	FINISH	LUBE
Rivet	87843646	A72938	QQ-N-281/MONEL	None	None
Stern	87843692	A72241	AMS5657 / 15-7PH	None	AS5272, Type 1, Moly Disulfide
Collar	00000000	A73231	A-286 / AMS5731	Passivate per AMS2700	None

W.O. #: 5527170

Final Lube: WAX

QUALITY CONFORMANCE/ACCEPTANCE RESULTS

QUALITY PERFORMANCE/ACCEPTANCE RESULTS								
MIN REQ'D SAMPLE SIZE SPECS RESULTS	INSTALLED SHEAR		TENSION		SPINDLE RETENTION			DISASSEMBLY
	751		490		150		150	10
	5	5	5	5	5		5	5
	C-N	B	C-N	B	C-N		B	C-N-B
916	916	640	640	226		226	33	
976	976	616	616	277		277	30	
939	939	610	610	291		291	27	
966	966	616	616	298		298	58	
929	929	622	622	285		285	16	
C=CR N=NAS M=MIL B=BAC LOAD VALUES IN POUND								

C=CR N=NAS
M=MIL B=BAC
LOAD VALUES
IN POUND

<u>PCS.</u>	<u>ITEM</u>	<u>STATUS</u>	<u>PCS.</u>	<u>ITEM</u>	<u>STATUS</u>
20	EXAMINATION	PASS	20	INSTALLATION (Min and Max Grips)	PASS

Comments:

Blind Fastener

Tr. Rev: -
Rev. Date: 8/19/2013Q Code
V01Inspector
J Segura

The parts contained in this shipment have been manufactured and inspected in accordance with TSO-C148. The conditions and tests required for TSO approval of this article are minimum performance standards. Aircraft fasteners approved under this TSO are not necessarily interchangeable with other aircraft fasteners approved under this TSO. Fasteners of similar dimensional properties may have widely varying performance and metallurgical properties. Substitution of parts may only be done if acceptable to or approved by the Administrator.

This test report shall not be reproduced except in full, without the written approval of the laboratory.
The recording of false, fictitious, or fraudulent statement or entries on the certificate may be punished as a felony under Federal law.

Form No. 1141-10-75 Rev. F 07/15/10 CR10-0832

Page 1 of 2

52800 Higgins Blvd
Elkhart, IN 46514

A-1 Wire Tech, Inc.

NORTH AMERICAN EXTERIOR MANUFACTURER OF HIGH NICKEL STEEL WIRE

Certified Material Test Report

HEAT/LOT

Load ID. 00085995

MM73P2BR11

SOLD TO

Page 1

CHERRY AEROSPACE
1224 East Warner Avenue
Santa Ana, CA 92705
USA

SALES ORDER
105215 / 1

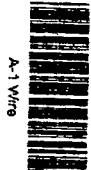
Date Printed 04/12/2013

CUSTOMER P.O. PO129881-9	CUSTOMER PART M015.1370	QUANTITY 147.00	PIECES 1	SHIPMENT DATE 04/12/2013						
PRODUCT: Alloy: M400LC Diameter: .1370" Length: X Coil M015 Temper.: Finish: Shaved, Soap Drawn 7044101-137-00-92										
CERTIFICATION REQUIREMENTS M015.1370 REV AA, QQ-N281 D CLAS A FORM 7 CHEMISTY ONLY TO: AMS4730G										
*As Shipped Properties										
<u>TEST</u>	<u>UNITS</u>	<u>RESULTS</u>								
*Tensile	ksi	77.1								
*Yield	ksi	65.6								
*Elongation	Percent	42.6								
*Reduction Of Area	Percent	84.8								
*Grain Size	Grain Si	10								
*Hardness	HRB	82								
<u>TEST</u>	<u>RESULT</u>									
*Wrap/Bend	Pass									
Chemical Analysis %										
C	Mn	Fe	S	Si	Cu	Ni	Al	P	Pb	Sn
.02	1.00	1.56	.002	.16	32.7	64.25	.02	.01	.00017	.00020
Zn										
.00039										
Specifications										
*Melt Source DFARS COMPLIANT / MELT SOURCE: HUNTINGTON ALLOYS / COUNTRY OF ORIGIN: USA / MFG: USA										



MAY 01 2013

MM73P2BR11



A72938

Visual and dimensional examination
Satisfactory
Material, when shipped is free from
contamination by mercury, radium,
alpha source, and low melting
point elements.

This is to certify that all required samplings, inspections, operations and tests performed by A-1 Wire Tech, Inc. and its subcontractors are in accordance with the specification requirements. The test report represents the actual attributes of the material furnished and the values shown are correct and accurate. The material described by this certificate is in full compliance with all order and inspection requirements. We hereby certify that the above data are in accordance with the specification requirements. The recording of false, fictitious or fraudulent statements or entries on this document may be punishable as a felony under federal statute

Tom Smith

Tom Smith
Quality Assurance Manager



HUNTINGTON ALLOYS CORPORATION
3200 Riverside Drive, Huntington, West Virginia 25705-1771 USA
Tel: +1.304.528.5100 Toll-Free in the USA: 1.800.334.4628
Fax: +1.304.528.5643 info@specialmetals.com

Certificate No. 8574-00

Dated 26-SEP-12

CERTIFIED MATERIALS TEST REPORT

Page No. 1 / 3

Note: The recording of false, fictitious or fraudulent statements on entries on this document may be punishable as a felony under federal statute.

This report relates only to the item(s) tested and may not be reproduced except in full.

Customer
A-1 WIRE TECH
C/O HUNTINGTON ALLOYS CORP
ACCOUNTS PAYABLE
3200 RIVERSIDE DRIVE
HUNTINGTON WV

Ship To
A-1 WIRE TECH
52800 HIGGINS BLVD
ELKHART
IN
46514

Sales Order Number	Purchase Order Number	Mark Order Number	Material Heat / Lot Identity
100055232 / 1.2	33208	33208-3	MM73P2BR11
			UNS Number N04400

Material Description

MONEL alloy 400, AIR, , HOT ROLLED ROD - COIL, PICKLED, ANNEALED, .5310, IN
8 PCS 7012 LBS

Specifications

US FED QQ-N-281D AM-2 CL-A CHEM ONLY/ ASTM-B-164-03 (2008) CHEM ONLY/ ASME-SB-164-2010 EDITION 11 ADDENDA CHEM ONLY/ SAE AMS 4730G CHEM ONLY/ NACE MR0175-ISO 15156-3 2ND EDITION (2009)/ GE S-400 (10-10-2011)/ GE S-1000 (8-1-2011)/ ASME SECTION III 2010 EDITION 11 ADDENDA NCA-3800/ A-1 M400LC MOD FOR CUST 295-01 REV 4-11-08.

MAY 01 2013



A-1 Wire
MM73P2BR11



A72938

ANALYSIS

C %	MN %	FE %	S %	SI %	CU %	NI %
.02	1.00	1.56	.002	.16	32.70	64.25
Method CS344	XR26	XR26	CS344	XR26	XR26	XR26
AL %	P %	PB %	SN %	ZN %		
.02	.01	.00017	.00020	.00039		
Method JACO	JACO	ICP-MS	ICP-MS	ICP-MS		

BRIGHTRAY, CORRONEL, FERRY, INCOCLAD, INCOLOY, INCONEL, INCOTHERM, INCO-WELD, KOTHERM, MAXORB, MONEL, NILO, NILOMAG, NIMONIC, NIOOTHERM, NI-SPAN, UDIMET & WIGGIN are trademarks of the Special Metals group of companies



HUNTINGTON ALLOYS CORPORATION
3200 Riverside Drive, Huntington, West Virginia 25705-1771 USA
Tel: +1.304.528.6100 Toll-Free in the USA: 1.800.334.4826
Fax: +1.304.528.6643 Info@specialmetals.com

Certificate No. 8574-00

Dated 26-SEP-12

CERTIFIED MATERIALS TEST REPORT

Page No. 3 / 3

HUNTINGTON ALLOYS CORPORATION IS AN ACCREDITED INDEPENDENT NADCAP MATERIALS TESTING LABORATORY VIA CERTIFICATE NUMBER 127805 (EXPIRES APRIL 30, 2013) FOR ALL TESTING SPECIFIED IN THE SCOPE OF ACCREDITATION. MATERIAL PRODUCED UNDER QA SYSTEM DOCUMENTED IN HUNTINGTON ALLOYS CORP QA MANUAL REV. 49, DATED 2/17/2011. QUALITY SYSTEM CERTIFICATION: ISO 9001:2008 (ABS-QE CERT. 30125); EN 10 204/DIN 50049 (TYPE 3.1)

VISUAL AND DIMENSIONAL EXAMINATION SATISFACTORY.

MATERIAL, WHEN SHIPPED, IS FREE FROM CONTAMINATION BY MERCURY, RADIUM, ALPHA SOURCE, AND LOW MELTING ELEMENTS.

CHEMICAL ANALYSIS AS REQUIRED FOR CARBON, SULFUR, NITROGEN, OR OXYGEN IS PERFORMED BY COMBUSTION TECHNIQUES. ALL OTHER REPORTED ELEMENTS ARE ANALYZED BY X-RAY AND/OR EMISSION SPECTROSCOPY."

AUTHORIZED QUALITY CERTIFICATION REPRESENTATIVES:

W.E. BOLEN, M.A. MORRISON, D.K. MILLER, K.R. SMITH, G.J. BURKHEAD



MAY 01 2013

A-1 Wire
MMZP2BR11



A72938

End Of Certificate

This is to certify that all required samplings inspections and tests have been performed in accordance with the order and specification requirements. The test report represents the actual attributes of the material furnished and the values shown are correct and true. The material described by this certificate is in full compliance with all order and inspection requirements. We hereby certify that the figures given are in accordance with the specified contract requirements.

REV. 8/08

Signed

For and on behalf of HUNTINGTON ALLOYS CORPORATION
Authorized Signature

BRIGHTRAY, CORRONEL, FERRY, INCOCLAD, INCOLOY, INCONEL, INCOTHERM, INCO-WELD, KOTHERM, MAXORB, MONEL, NILO, NILOMAG, NIMONIC, NIOOTHERM, NI-SPAN, UDIMET & WIGGIN are trademarks of the Special Metals group of companies

CERTIFICATE OF TESTS
CERT SERIAL# 000846315

ABNAHMEPRUEFZEUGNIS

CERTIFICAT DE CONTROLE



CARPENTER

Carpenter Technology Corporation
101 West Bern Street, Reading, Pa. 19601
Tel: (610) 208-2000 (800) 338-4592

- THE RECORDING OF FALSE, FICTICIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47.
- THE VALUES AND OTHER TECHNICAL DATA REPRESENT THE RESULTS OF ANALYSES AND TESTS MADE ON SAMPLES COLLECTED FROM THE TOTAL LOT. ORIGINAL DATA RECORDS CAN BE TRACED BY REFERENCE TO THE CARPENTER ORDER NUMBER.
- MATERIAL IS MANUFACTURED FREE FROM MERCURY, RADIUM, ALPHA AND GAMMA SOURCE CONTAMINATION.
- THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF CARPENTER TECHNOLOGY CORPORATION.

12/28/12

CUSTOMER/BESTELLER/CLIENT

SELLER/VERKÄUFER/VENDEURPAGE 1 OF 2

CHERRY AEROSPACE LLC
PO BOX 2157
1224 E WARNER
SANTA ANA , CA 92707

CARPENTER TECHNOLOGY CORP

101 W. BERN STREET
READING , PA 19601

CUSTOMER ORDER NO./BESTELL-NR./N° DE COMMANDE	CARPENTER NO./WERKS-NR./N° DE REFERENCE INTERNE	DATE/DATUM/DATE	WEIGHT/GEWICHT/POIDS
PO135079-3	LOS477201 L28731	12/28/12	2625.000

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE: 566322

PRODUCT DESCRIPTION: CARPENTER 15-7 PH ANNEALED COLD FINISH SEAM FREE C HDG
SC2 STRAND CU/SOAP
PART NUMBER: M084.0975

SPECIFICATION: CHERRY AEROSPACE M-84 REV AC (06/22/10) EXCPT LTR (07/25/11)
PENDING
AMS 5657 REV C (08/ /07) (CHEM ONLY)

SIZE 0.097500 IN. (2.48 MM) RD WIRE

PRIMARY HEAT CHEMISTRY(WT%): (TEST METHOD IS SHOWN IN PARENTHESIS)

C (COM)	MN (XRF)	SI (XRF)	P (XRF)	S (COM)	CR (XRF)
0.07	0.55	0.31	0.014	0.001	15.41
NI (XRF)	MO (XRF)	AL (XRF)	N (FUS)		
7.34	2.14	1.34	0.026		

CAPABLE OF SURFACE FINISH OF 63 RMS MAX

MICRO SURFACE DEFECT - ACCEPTABLE (COILS 1 THRU 14 F & B)

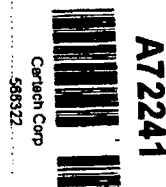
CAST TEST - ACCEPTABLE

HARDNESS AS SHIPPED, HV - 323 (CENTER)
PER ASTM E384 500 GRAM LOAD

(T) RANSVERSE (L) ONGITUDINAL
YIELD STRENGTH, (0.20 %) KSI (MPA) 116.0 (800)
TENSILE STRENGTH, KSI (MPA) 146.0 (1007)
ELONGATION IN .38", % 35.0
JAN - 8 2013

MATERIAL HAS BEEN MELTED AND MANUFACTURED IN THE USA WHICH IS A QUALIFYING COUNTRY TO DFARS REQUIREMENTS 252.225-7014 WITH ALTERNATE 1 FOR QUALIFYING COUNTRY 225.872.1, SUPERSEDED BY DFARS REQUIREMENTS DFARS 252.225-7008 AND 252.225-7009.

THIS ORDER WAS MANUFACTURED IN ACCORDANCE WITH CARPENTER SPECIALTY ALLOYS OPERATIONS QUALITY PROGRAM MANUAL, REVISION 30 DATED 09/28/11.



CONTINUED ON NEXT PAGE

Certificate of Analysis

Radcliff Wire Inc. 97 Ronzo Rd., P.O. Box 603, Bristol, CT 06010

Date Shipped: 06/12/2013

PO #: VP125694

Qty. Shipped: 147 LBS-17 BLACK
MIG SPOOLS

Radcliff No.: 128930

Heat No.: D5874

Customer: CHERRY AEROSPACE
SANTA ANA OPERATIONS
1224 EAST WARNER AVE
SANTA ANA, CA 92705-5414

Country of Origin: USA

Original Mill Source: USA

Size: .006 X .011 X .056 ***

Material: A286 Stainless Steel

Description: SPECIAL SHAPE

Specification: AMS 5731 REV L, AMS 5737 REV P
CHEM. ONLY

Notes:

DFAR COMPLIANT
PART# M189.44 REV W
CONSIGNMENT ORDER

Chemical Properties

Al: 0.24% B: 0.0072%
Cr: 14.13% Cu: 0.07%
Ni: 24.79% P: 0.009%
Ti: 2.16% V: 0.27%

Bi: <0.00001%
Fe: BAL%
Pb: .0.0001%

C: 0.034%
Mn: 0.14%
S: .0.001%

Co: 0.06%
Mo: 1.21%
Si: 0.12%

Tensile: 98 KSI

Rockwell:

Certs/Material



7.15.13

RADCLIFF WIRE, INC.
D5874



A73231

Lisa Platek

Certification Clerk

The material as shipped is free from mercury contamination

Latrobe Specialty Steel Company
2626 S. Ligonier St.
Latrobe, PA 15650

CERTIFICATE OF TEST

Production Order Number	Wgt. Shipped	Sales Order No.	Heat No.
10379207-01-01	12877	20168995-01	D5874
Customer Order No./Req'n. No.	Delivery Number		
2009740	30406653		

Bill To: 502026

CENTRAL WIRE
TECHALLOY UNION
6509 OLSON ROAD
UNION, IL 60180
USA

Ship To: 407182

CENTRAL WIRE FOND DU LAC
1795 SOUTH HICKORY STREET
FOND DU LAC, WI 54937
USA

Material Description:

(TO SIZE) .343 RND COIL LS-A286 VAR HR CENTRAL WIRE D.3.PRS.010.S REV A EXCEPT AS RECEIVED UTS 110 KSI MAX, D.3.PRS.009.S REV F EXCEPT 300# MINIMUM COIL WEIGHT & .008" MAX DEFECT DEPTH, 10 CFR CH. I (1-1-08 EDITION) PART 21 - REPORTING OF DEFECTS & NONCOMPLIANCE INGOT #1

Chemical Analysis Wt%:

C	Si	Mn	S	P	B	Cr	V	Ni	Mo	Co	Cu	Ti	Al	Fe
.034	.12	.14	<.001	.009	.0072	14.13	.27	24.79	1.21	.06	.07	2.16	.24	Bal.
Pb	Bi													
<.0001	<.00001													

Bismuth (Bi) and lead (Pb) were tested at Laboratory Testing Inc., Report number TLS001-11-06-21041-1, TLS001-11-06-21360-1 & TLS001-11-06-20812-1.

As Received:

Ultimate Tensile Strength per ASTM E8-09 & ASTM A370-11: 98.5 KSI
This test was performed at Product Evaluation Systems, Inc., LTB Report No. 49713.

Grain Size per ASTM E-112-10: 9.5

Capability Heat Treatment: 1650°F (2 hrs) WQ + 1325°F (16 hrs) AC

Room Temperature Tensile Test per ASTM E8-09 & ASTM A370-11:

Longitudinal center at .343" Rnd.

ID	UTS (ksi)	0.2TYS (ksi)	El (%in4d)	R.A. (%)	HRC
UF	165.3	112.4	24	47	37

This test was performed at Westmoreland Mechanical Testing & Research, Inc.,
Report No. 1-70188.

Combination Stress Rupture per ASTM E292-09:

ID	Temp (°F)	Stress (ksi)	El (%in4d)	Rupture Life (hrs)^	Rupture Location
UG	1200	65	45.7	69.2	Smooth

^Upload after 48 hrs./ 5 KSI/ every 8-10 hrs.; final stress 75 KSI

This test was performed at Westmoreland Mechanical Testing & Research, Inc.,
Report No. 1-70188.

Grain Size per ASTM E-112-10: 9

Testing methods for chemical analysis tested at Latrobe Specialty Steel are as follows: C, S, N, O & H - Combustion
Si, Mn, W, Cr, V, Ni, Mo, Co, Cu, Al >1%, Ti >1%, Pb, Ta, Fe & Sn - X-Ray. Balance of elements analyzed on OE.
Other testing methods not listed above have been conducted per certified material specification(s).

Latrobe Specialty Steel Company is registered to Quality Management System Standards: ISO 9001 and AS9100.

Need certs? Our air melt certs are available online at <http://www.latrobebesteel.com>

We certify this material to have been manufactured, inspected, and tested; and found the results to conform to all drawing and/or specification requirements and order requirements as applicable. The recording of false, fictitious or fraudulent statements or entries on the documents may be punishable as a felony under Federal Statute. This certificate or report shall not be reproduced except in full, without the written approval of Latrobe Specialty Steel Company.

Inspection Department
Paula M. Platt - Sr. Metallurgical Certification Coordinator

Date
08/29/11

RADCLIFF WIRE, INC. -
D5874



A73231



7.15.13

REC'D APR 11 2013

Latrobe Specialty Steel Company
2626 S. Ligonier St.
Latrobe, PA 15650

CERTIFICATE OF TEST

Production Order Number		Wgt. Shipped	Sales Order No.	Heat No.
10379207-01-01		12877	20168995-01	D5874
Customer Order No./Req'n. No.	Delivery Number			
2009740	30406653			

Bill To: 502026

CENTRAL WIRE
TECHALLOY UNION
6509 OLSON ROAD
UNION, IL 60180
USA

Ship To: 407182

CENTRAL WIRE FOND DU LAC
1795 SOUTH HICKORY STREET
FOND DU LAC, WI 54937
USA

Material Description:

(TO SIZE) .343 RND COIL LS-A286 VAR HR CENTRAL WIRE D.3.PRS.010.S REV A EXCEPT AS RECEIVED UTS 110 KSI MAX, D.3.PRS.009.S REV F EXCEPT 300# MINIMUM COIL WEIGHT & .008" MAX DEFECT DEPTH, 10 CFR CH. I (1-1-08 EDITION) PART 21 - REPORTING OF DEFECTS & NONCOMPLIANCE INGOT #1

Capability Heat Treatment: 1800°F (1 hr) WQ + 1325°F (16 hrs) AC

Room Temperature Tensile Test per ASTM E8-09 & ASTM A370-09:

Longitudinal center at .343" Rnd.

ID	UTS(ksi)	0.2TYS(ksi)	El(%in4d)	R.A.(%)	HRC
UI	162.2	106.3	26	54	36

This test was performed at Westmoreland Mechanical Testing & Research, Inc.,
Report No. 1-70189.

Combination Stress Rupture per ASTM E292-09:

ID	Temp(°F)	Stress(ksi)	El(%in4d)	Rupture Life (hrs)^	Rupture Location
UJ	1200	70	18.6	70.9	Smooth

^Upload after 48 hrs./ 5 KSI/ every 8-10 hrs.; final stress 85 KSI

This test was performed at Westmoreland Mechanical Testing & Research, Inc.,
Report No. 1-70189.

Country of origin (Manufacturing & Melting): USA

During the manufacturing process, this material has not come in direct contact with Mercury or any of its compounds or any Mercury or Cobalt 60 or other radioactive sources containing device employing a single boundary of containment. Material is also weld and radioactive contamination free.

Testing methods for chemical analysis tested at Latrobe Specialty Steel are as follows: C, S, N, O & H - Combustion
Si, Mn, W, Cr, V, Ni, Mo, Cu, Al >1%, Ti >1%, Co, Ta, Fe & Sn - X-Ray. Balance of elements analyzed on OE.
Other testing methods not listed above have been conducted per certified material specification(s).

Latrobe Specialty Steel Company is registered to Quality Management System Standards: ISO 9001 and AS9100.

Need certs? Our air melt certs are available online at <http://www.latrobesteel.com>

We certify this material to have been manufactured, inspected, and tested; and found the results to conform to all drawing and/or specification requirements and order requirements as applicable. The recording of false, fictitious or fraudulent statements or entries on the documents may be punishable as a felony under Federal Statute. This certificate or report shall not be reproduced except in full, without the written approval of Latrobe Specialty Steel Company.



7.15.13

REC'D APR 11 2013

Paula M Platt

Inspection Department

Paula M. Platt - Sr. Metallurgical Certification Coordinator

08/29/11

Date

RADCLIFF WIRE, INC. 407182
D5874



A73231

613-287-3752 FAX 613-287-5617
 518-833-9632 FAX 518-833-2213
 870-382-2980 FAX 870-382-6988
 803-283-3353 FAX 803-283-8303



FOND DU LAC, WI
 UNION, IL
 FERRIS, CA

920-928-0609 FAX 920-928-0652
 815-923-2131 FAX 815-923-2126
 951-657-2105 FAX 951-943-6081

THE LEADING MANUFACTURER OF STAINLESS STEEL AND NICKEL ALLOY WIRE PRODUCTS
 EXECUTIVE OFFICES: PERTH, ON CANADA - EMAIL: sales@centralwire.com

CENTRAL WIRE
 6509 OLSON ROAD
 TEL: 815-923-2131

UNION, IL 60180-9730
 FAX: 815-923-2126

CERTIFICATE OF CONFORMANCE

SOLD
TO

RADCLIFF WIRE INC.
 P. O. BOX 603
 BRISTOL

CT 06011-0603

USA

SHIP
TO

RADCLIFF WIRE INC.
 97 RONZO ROAD
 BRISTOL,

CT 06011-0603

USA

CUSTOMER'S PO NO.	TYPE OF CERT	CUSTOMER	ORDER NO.	WORK ORDER	DATE SHIPPED
46499	Customer	124610	1181606 2	4143739	4/04/13

SPECIFICATIONS:

ITEM DESCRIPTION		
DESCRIPTION	SPEC. CLASS	HEAT
Forming A286SF SKIN PASSED Bright .0300 200LB.Plus Clean		D5874
	QTY SHIP 157	044

CHEMICAL ANALYSIS						
C	MN	SI	P	S	CR	NI
.034	.14	.12	.009	< .001	14.13	24.79
MO	CU	CO	AL	TI	FE	B
1.21	.07	.06	.24	2.16	Balance	.0072
V	BI	PB				
.27	< .00001	< .0001				

MECHANICAL PROPERTIES							
AS SHIPPED PROPERTIES:							
TENSILE 114.000 KSI MIN	TENSILE 115.000 KSI MAX						
AFTER HEAT TREAT PROPERTIES:							

"PASSIVATED IN PROCESS"

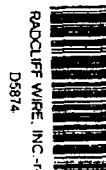
The material as shipped is free from mercury contamination. I certify the chemical analysis and physical and mechanical test results reported above are correct as contained in the records of the company.

Very truly yours,



7.15.13

[Signature]
 AUTHORIZED SIGNATURE



A73231

CERTIFICATE OF TESTS
CERT SERIAL# 000846315

ABNAHMEPRUEFZEUGNIS

CERTIFICAT DE CONTROLE



CARPENTER

Carpenter Technology Corporation
101 West Bern Street, Reading, Pa. 19601
Tel: (610) 208-2000 (800) 338-4592

- THE RECORDING OF FALSE, FICTICIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHED AS A FELONY UNDER FEDERAL STATUTES INCLUDING FEDERAL LAW, TITLE 18, CHAPTER 47.
- THE VALUES AND OTHER TECHNICAL DATA REPRESENT THE RESULTS OF ANALYSES AND TESTS MADE ON SAMPLES COLLECTED FROM THE TOTAL LOT. ORIGINAL DATA RECORDS CAN BE TRACED BY REFERENCE TO THE CARPENTER ORDER NUMBER.
- MATERIAL IS MANUFACTURED FREE FROM MERCURY, RADIUM, ALPHA AND GAMMA SOURCE CONTAMINATION.
- THIS DOCUMENT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN CONSENT OF CARPENTER TECHNOLOGY CORPORATION.

12/28/12

CUSTOMER / BESTELLER / CLIENT

SELLER / VERKÄUFER / VENDEUR PAGE 2 OF 2

CHERRY AEROSPACE LLC
PO BOX 2157
1224 E WARNER
SANTA ANA , CA 92707

CARPENTER TECHNOLOGY CORP

101 W. BERN STREET
READING , PA 19601

CUSTOMER ORDER NO. / BESTELL-NR. / N° DE COMMANDE	CARPENTER NO. / WERKS-NR. / N° DE REFERENCE INTERNE	DATE / DATUM / DATE	WEIGHT / GEWICHT / POIDS
PO135079-3	LOS477201 L28731	12/28/12	2625.000

HEAT NUMBER / SCHMELZE-NR. / N° DE COULEE:

566322

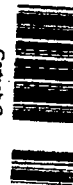
CARPENTER'S QUALITY MANAGEMENT SYSTEM WAS REGISTERED AS OF NOVEMBER 24, 2010 TO THE REQUIREMENTS OF ISO 9001:2008 APPROVAL CERTIFICATE 10-1385R BY PERFORMANCE REVIEW INSTITUTE. CERTIFICATE OF TEST IS PREPARED IN ACCORDANCE WITH PARAGRAPH 3.1 OF EN 10204 (DIN 50049). WE HEREBY CERTIFY THAT THE ABOVE TEST DATA ARE IN ACCORDANCE WITH THE PURCHASE ORDER AND SPECIFICATION REQUIREMENTS, AS DOCUMENTED IN THIS CERTIFICATE OF TESTS.

TEST METHODS ARE PER THE ASTM STANDARDS ON FILE AND IN EFFECT AT TIME OF ORDER ACCEPTANCE, STANDARD PRACTICES, OR AS AGREED UPON BETWEEN CARPENTER & CUSTOMER.

SHERRY L KREIDER
ADMINISTRATOR - QUALITY
CARPENTER TECHNOLOGY CORPORATION

M084,0975

Certech Corp
566322



A72241

JAN - 8 2013



Sherry Kreider



HUNTINGTON ALLOYS CORPORATION
3200 Riverside Drive, Huntington, West Virginia 25705-1771 USA
Tel: +1.304.626.5100 Toll-Free in the USA: 1.800.334.4626
Fax: +1.304.626.6643 info@specialmetals.com

Certificate No. 8574-00

Dated 26-SEP-12

Page No. 2 / 3

CERTIFIED MATERIALS TEST REPORT

ANALYSIS METHOD LEGEND

ICP - Inductively Coupled Plasma
CS344 - Carbon/Sulfur
XR26 - X-Ray Fluorescence 2600
JACO - Optical Emission Spectroscopy

TENSILE TEST

ROOM TEMP TENSILE - LONG|LAB|MECHANICAL

TEMPER TESTED	HARD 1 VALUE	HARD 1 TYPE	TENSILE KSI	YS .2% OFST KSI
AN	51.0	HRB	64.4	25.8

YS @ 1% OFST KSI	EFF GA	LNTH IN	REDUCT OF AREA	ELONGATION	ORIENTATION
0.0	2.000	83.0	51.7		LONG

OTHER TESTS

GRAIN SIZE MEASUREMENT|LAB|METALLOGRAPHY

TEMPER TESTED	TEST ORIENT	AV GS ASTM	NRM or DUP
AN	TRANSVERSE	7	NORMAL

TEST LOCATION

F



MAY 01 2013



NO WELDING OR WELD REPAIR WAS PERFORMED.

COUNTRY OF ORIGIN: MELTED AND MANUFACTURED IN THE USA

THIS CERTIFICATION AFFIRMS THAT THE CONTENTS OF THIS REPORT ARE CORRECT AND ACCURATE AND THAT ALL TEST RESULTS AND OPERATIONS PERFORMED BY SPECIAL METALS CORPORATION, INC. OR ITS SUBCONTRACTORS ARE IN COMPLIANCE WITH THE MATERIAL SPECIFICATIONS AND THE SPECIFIC APPLICABLE MATERIAL REQUIREMENTS OF ASME SECTION III.

ASME QUALITY SYSTEMS CERTIFICATE QSC-328, EXPIRES 3/25/2014.

AS APPLICABLE ANY SUBCONTRACTED WORK ALSO COMPLIES WITH CUSTOMER AND ASME SECTION III, NCA 3800 REQUIREMENTS.

QUALITY SYSTEM MEETS REQUIREMENTS OF DIRECTIVE 97-23/EC (PRESSURE EQUIPMENT DIRECTIVE),

ANNEX 1, CHAPTER 4.3 PER ABS GROUP LTD CERTIFICATE 41734 (EXPIRES JULY 30, 2014)."

BRIGHTRAY, CORRONEL, FERRY, INCOCLAD, INCOLOY, INCONEL, INCOTHERM, INCO-WELD, KOTHERM, MAXORB, MONEL, NILO, NILOMAG, NIMONIC, NIOTHERM, NI-SPAN, UDIMET & WIGGIN are trademarks of the Special Metals group of companies

A-1 Wire Tech, Inc.

52800 Higgins Blvd
Elkhart, IN 46514

Certified Material Test Report

HEAT/LOT

Load ID. 00085995

MM73P2BR11

SOLD TO

Page 2

CHERRY AEROSPACE
1224 East Warner Avenue
Santa Ana, CA 92705
USA

SALES ORDER

105215 / 1

Date Printed 04/12/2013

CUSTOMER P.O.	CUSTOMER PART	QUANTITY	PIECES	SHIPMENT DATE
PO129881-9	M015.1370	147.00	1	04/12/2013
PRODUCT: Alloy: M400LC Diameter: .1370" Length: X Coil M015 Temper.: Finish: Shaved, Soap Drawn 7044101-137-00-92				
End of Certification				



MAY 01 2013

A-1 Wire
MM73P2BR11



A72938

Visual and dimensional examination
Satisfactory
Material, when shipped is free from
contamination by mercury, radium,
alpha source, and low melting
point elements.

This is to certify that all required samplings, inspections, operations and tests performed by A-1 Wire Tech, Inc. and its subcontractors are in accordance with the specification requirements. The test report represents the actual attributes of the material furnished and the values shown are correct and accurate. The material described by this certificate is in full compliance with all order and inspection requirements. We hereby certify that the above data are in accordance with the specification requirements. The recording of false, fictitious or fraudulent statements or entries on this document may be punishable as a felony under federal statute.

Tom Smith

Tom Smith
Quality Assurance Manager



CHERRY AEROSPACE
SP3 Customer Division, a PCC Company

1224 East Warner Avenue
Santa Ana, CA 92707-0157



Accredited
NadcapTM

Chemical Processing
Heat Treating
ISO/IEC 17025
Material Testing Lab

Final Inspection & Test Report CherryMax® Rivet

An ISO9001 and AS9100 registered company. OASIS #6111041606

Customer Parts List

Lot I.D. No.: 87852289

Rev: -

<u>Customer Part Number</u>	<u>Rev</u>	<u>Proc. Spec.</u>	<u>Rev</u>
ASNA0078E402X	P	NAS1687	2
ASNA0078E402X	P	PS-CMR-3000	R
BACR15FR4M2R	Y	NAS1740	8
CAN43079M4-2	8	NAS1687	2
CAN43079M4-2	8	PS-CMR-3000	R
MBBN3012M3602	01/06	MBBN3015	12/03
NAS9310M-4-02	3	NAS1687	2

Parts delivered in accordance with the standard amendments as agreed by Cherry/EADS.

*** Ref: M7885/8-4-02